DRUG & COSMETIC INDUSTRY

APRIL, 1951

FEATURE ARTICLES • •

THE ATTACK ON ANTIHISTAMINICS		450
NEW ERA SALESMEN	Frazer V. Sinclair	452
BLOOD PLASMA SUBSTITUTES	Milton A. Lesser	454
VANISHING CREAMS AS BASIC COSMETICS	Harry Hilfer	456
STUDIES ON ACTH AND CORTISONE	George W. Thorn	458
DRUGS IN NEUROMUSCULAR DISORDERS	Dr. Kaous R. Unna	460
SYNERGISTIC ACTION OF DRUGS	O. S. Gibbs, M.D.	462
TECHNICAL SERVICE IN BULK PHARMACEUTICALS	George H. Schneller	464

DEPARTMENTS • •

KEEPING POSTED	Thomas R. Farrell	445
PACKAGING AND SELLING	Frazer V. Sinclair	467
NEW PRODUCTS AND NEW PACKAGES	Frank Child III	473
NEWS	Frank Child III	483
MANAGEMENT FORUM	Francis Chilson	495
INDUSTRY'S BOOKS	Harry G. Kelbly	505
PATENT THOUGHTS AND TRENDS	Thomas Cifelli, Jr.	508
COMPOUNDER'S CORNER	Milton A. Lesser	512
ADVANCING THERAPY	Milton A. Lesser	514
YOUR TRADE-MARK RECORD	John H. Graham	517
ABREAST OF THE MARKETS	Frank Child III	519
PERFUMER'S SHELF	Milton A. Lesser	524
READERS' QUESTIONS	Milton A. Lesser	527

THOMAS R. FARRELL, Editor
FRANCIS CHILSON, Production Consultant
MILTON A. LESSER, Technical Editor
HARRY G. KELBLY, Raw Material Editor
FRANK CHILD III, News Editor
MAX FRANKEL, Art Director

The Drug and Cosmetic Industry is published monthly by Drug Markets, Inc., Frazer V. Sinclair, President and Treasurer, Thomas R. Farrell, Vice-president and Secretary. Publication Address, 28 Renne Ave., Pittsfield, Mass., U. S. A. Editorial and General Office, 101 West 31st St., New York 1, N. Y., U. S. A.

Business Manager, Frazer V. Sinclair; Advertising Manager, P. W. Alexander; Advertising Representatives, Walter M. Brauneiss, C. R. Keeley. Production Manager, Katherine Hyde; Circulation Manager, Harry G. Kelbly.

Chicago Advertising Representative: Dwight H. Early, 100 No. LaSalle St., Chicago 2; Telephone, CEntral 6-2184.

Subscription price — $3.00 a year, in advance, Foreign Countries, $5.00. Single copies, 35c; Back issues, 50c. Entered as Second Class Matter, January 1, 1928, at the Post Office at Pittsfield, Mass., under the Act of March 3, 1879. Member of Audit Bureau of Circulations.

Contents Copyrighted 1951 by Drug Markets Inc.

DRUG & COSMETIC INDUSTRY

APRIL, 1951

FEATURE ARTICLES • •

THE ATTACK ON ANTIHISTAMINICS		450
NEW ERA SALESMEN	Frazer V. Sinclair	452
BLOOD PLASMA SUBSTITUTES	Milton A. Lesser	454
VANISHING CREAMS AS BASIC COSMETICS	Harry Hilfer	456
STUDIES ON ACTH AND CORTISONE	George W. Thorn	458
DRUGS IN NEUROMUSCULAR DISORDERS	Dr. Kaous R. Unna	460
SYNERGISTIC ACTION OF DRUGS	O. S. Gibbs, M.D.	462
TECHNICAL SERVICE IN BULK PHARMACEUTICALS	George H. Schneller	464

DEPARTMENTS • •

KEEPING POSTED	Thomas R. Farrell	445
PACKAGING AND SELLING	Frazer V. Sinclair	467
NEW PRODUCTS AND NEW PACKAGES	Frank Child III	473
NEWS	Frank Child III	483
MANAGEMENT FORUM	Francis Chilson	495
INDUSTRY'S BOOKS	Harry G. Kelbly	505
PATENT THOUGHTS AND TRENDS	Thomas Cifelli, Jr.	508
COMPOUNDER'S CORNER	Milton A. Lesser	512
ADVANCING THERAPY	Milton A. Lesser	514
YOUR TRADE-MARK RECORD	John H. Graham	517
ABREAST OF THE MARKETS	Frank Child III	519
PERFUMER'S SHELF	Milton A. Lesser	524
READERS' QUESTIONS	Milton A. Lesser	527

THOMAS R. FARRELL, Editor
FRANCIS CHILSON, Production Consultant
MILTON A. LESSER, Technical Editor
HARRY G. KELBLY, Raw Material Editor
FRANK CHILD III, News Editor
MAX FRANKEL, Art Director

The Drug and Cosmetic Industry is published monthly by Drug Markets, Inc., Frazer V. Sinclair, President and Treasurer, Thomas R. Farrell, Vice-president and Secretary. Publication Address, 28 Renne Ave., Pittsfield, Mass., U. S. A. Editorial and General Office, 101 West 31st St., New York 1, N. Y., U. S. A.

Business Manager, Frazer V. Sinclair; Advertising Manager, P. W. Alexander; Advertising Representatives, Walter M. Brauneiss, C. R. Keeley. Production Manager, Katherine Hyde; Circulation Manager, Harry G. Kelbly.

Chicago Advertising Representative: Dwight H. Early, 100 No. LaSalle St., Chicago 2; Telephone, CEntral 6-2184.

Subscription price — $3.00 a year, in advance, Foreign Countries, $5.00. Single copies, 35c; Back issues, 50c. Entered as Second Class Matter, January 1, 1928, at the Post Office at Pittsfield, Mass., under the Act of March 3, 1879. Member of Audit Bureau of Circulations.

Contents Copyrighted 1951 by Drug Markets Inc.

Dependable Uniformity too, in...

STANDARD'S WHITE OILS PETROLATUMS

U. S. P. WHITE OILS

Standard's U. S. P. White Oils meet or exceed the requirements of U. S. Pharmacopoeia XIV — Stanolind Liquid Paraffin Heavy, Merusol White Mineral Oil, Superla White Mineral Oil Nos. 18 and 34 — Saybolt Universal Viscosities ranging from 180 to 345 seconds at 100°F.

N. F. WHITE OILS

Standard's N. F. White Oils meet or exceed the requirements of edition IX of the National Formulary—Superla White Mineral Oil Nos. 9, 10, 13, 15 — Saybolt Universal Viscosities ranging from 85 to 150 seconds at 100°F.

TECHNICAL WHITE OILS

Superla White Rose Oil	White Rose Oil
Extra White Rose Oil	Acme White Oil
Premier White Oil	Eureka White Oil

Saybolt Universal Viscosities ranging from 50 to 100 seconds at 100°F.

PETROLATUMS

Stanolene (the premium white petrolatum)
Stanolind Petrolatum Snow White
Stanolind Petrolatum Lily White
Stanolind Petrolatum Cream White
Stanolind Petrolatum Golden Topaz
Stanolind Petrolatum Topaz
Stanolind Petrolatum Amber
Stanolind Petrolatum Red Veterinary
Stanolind Petrolatum Dark

STANDARD OIL COMPANY (INDIANA)

910 South Michigan Avenue Chicago 80, Illinois

Now . . . both the charm and haunting loveliness of Parisian Perfumes have been transplanted to New York.

Now . . . de Laire Specialties provide the creative perfumer with new, original accords to lighten and brighten the transitional stages of making his composition a new, distinctive perfume. de Laire Specialties offer new odor values and harmonies previously unknown.

PERFUME SPECIALTIES

deLaire

DIVISION OF

DODGE & OLCOTT, INC.

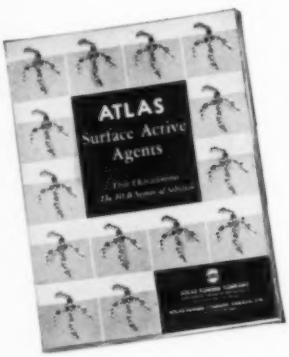
180 Varick Street • New York 14, N. Y.

Choosing emulsifiers may be like hunting for a needle in a haystack

—but you can make quick work of it with the **ATLAS** HLB System!

The Atlas HLB System of choosing emulsifiers is based on empirical numbers representing the Hydrophile-Lipophile Balance (HLB) of each emulsifier. By using the Atlas HLB System, you frequently eliminate many tedious trial-and-error samplings to determine which of hundreds of emulsifiers to use in *your* product. Here are four outstanding features of this system:

1. A table of required HLB numbers for the materials to be emulsified: the various fats, oils, and waxes.
2. A table of HLB numbers for Atlas emulsifiers which enables you to compare the potential usefulness of emulsifiers for the various fats, oils and waxes. You can easily calculate HLB numbers for combinations of emulsifiers.
3. A table of HLB ranges for various emulsion problems. This table also shows which fatty acid derivatives are most favorable.
4. A systematic procedure for testing emulsifiers to find the fatty acid derivatives and HLB most favorable to your problem. This procedure helps eliminate wide groups of materials from further research, and determines most favorable *ratios* of emulsifiers in mixtures.



The HLB System—first of its kind—is described in detail in the new Atlas Surface Active Agents Book. Write for your copy today on your official stationery.

Atlas produces a wide line of emulsifiers offering a complete range of solubility from oil-solubility to water-solubility, with many gradations of organic solubility. They also offer a wide range of physical forms, including thin liquids, viscous oils, and soft or hard waxes.

Arlex and Sorbo sorbitol
Span, Tween, and Arlacel emulsifiers
Soluble lanolin and beeswax type emulsifiers
Hystrene high-purity stearic acids

CHEMICALS ATLAS EXPLOSIVES

ATLAS

INDUSTRIAL CHEMICALS DEPARTMENT

ATLAS POWDER COMPANY, WILMINGTON, DELAWARE • OFFICES IN PRINCIPAL CITIES • CANADA—BRANTFORD

Announcing

CRYSTALLINE

available in stabilized, high potency, dry granular form and as a liquid palmitate derivative

For the first time in history, crystalline Vitamin A, has been produced by synthesis *on a commercial scale.*

No longer is it necessary to tolerate the extraneous materials found in previous natural and synthetic products. All the important advantages of the pure crystalline material are now available in unrestricted volume in these new Pfizer products:

STABILIZED CRYSTALLINE VITAMIN A ACETATE

A dry product of exceptional stability which can be handled, measured and stored under all normal conditions. Insensitive to oxidation or humidity, *Stabilized Crystalline Vitamin A Acetate* fills a long felt need for a dry, high-potency product which can be used in the manufacture of Vitamin A tablets, in the fortification of foods and in the preparation of other dry products, without fear of deterioration.

VITAMIN A PALMITATE

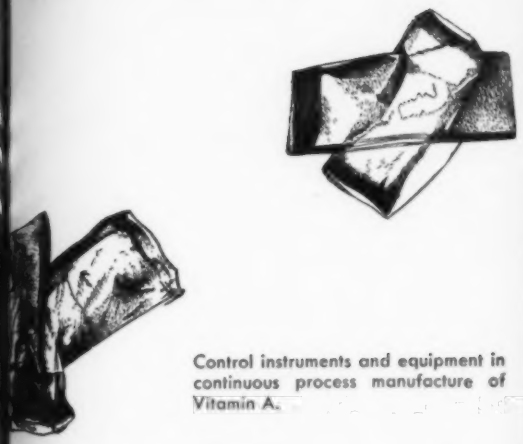
Derived from pure Crystalline Vitamin A Acetate, the outstanding purity and high potency of this product make it ideal for use in oil solutions and aqueous dispersions. It is also particularly suited to the fortification of milk and other liquid food products where taste is a factor.

WRITE OR PHONE FOR COMPLETE DETAILS

These new Crystalline Vitamin A derivatives make possible higher quality products than ever before attainable and open the way for many new applications. Write for samples, prices and technical data.

STABILIZED CRYSTALLINE VITAMIN A ACETATE	**Physical Characteristics** — Finely divided dry powder, light yellow color, practically odorless and tasteless. **Potency** — Standardized at 500,000 U.S.P. units per gram. **Purity** — Derived from Crystalline Vitamin A Acetate, the only pure form of this vitamin commercially produced. **Packaging** — Packaged in standard amber glass, screw type bottles and in drums.
VITAMIN A PALMITATE	**Physical Characteristics** — Liquid — yellow color, practically odorless and tasteless. **Potency*** — Not less than 1,600,000 U.S.P. units per gram. **Purity** — Derived from pure Crystalline Vitamin A Acetate, it has a purity of 90-95%. **Packaging** — Packed in aluminum bottles under nitrogen.

*Also available in oil solution at a potency of 1,000,000 U.S.P. units per gram.



Control instruments and equipment in continuous process manufacture of Vitamin A.

VITAMIN A ACETATE

now being produced in commercial quantity

The large new Pfizer installations at Groton, Conn., provide unrivaled facilities for the manufacture of vitamins. Here Pfizer has installed the latest developments in modern equipment utilizing the most advanced techniques.

The continually expanding activities of Pfizer's highly skilled technical staff promise unceasing pioneering in the pharmaceutical fields of vitamins, antibiotics, organics and inorganics.

Investigate the potentialities made possible by using this new pure form of Vitamin A in your products.

Air view of Pfizer's huge new plant at Groton, Conn., in which Crystalline Vitamin A is produced.

Photomicrograph of crystals of synthesized Vitamin A.

MAIL COUPON FOR TECHNICAL DATA

Chas. Pfizer & Co., Inc., 630 Flushing Ave., Brooklyn 6, N. Y.
Kindly send me Technical Data on Crystalline Vitamin A.

Company.....

Address.....

.....

Type of Business.....

Interested in Vitamin A for.....

.....

Signed by..... Position.....

Pfizer

Manufacturing Chemists for Over 100 Years

Chas. Pfizer & Co., Inc., 630 Flushing Ave., Brooklyn 6, N. Y.; 425 North Michigan Ave., Chicago 11, Ill.; 605 Third St., San Francisco 7, Calif.; Export Dept. 81 Maiden Lane, New York 38, N. Y.

Your Product will be in good company at the Private Brand Division of Avon Products, Inc.

The good companions will be those well-established brands of fine cosmetics and toiletries that are forging ahead, steadily building regular repeat sales . . . quality products whose manufacture is confidently entrusted to the skilled care of an experienced staff of workers under the direction of cosmetic technicians of renowned ability. Avon's executive staff includes specialists in every branch of cosmetic and toiletries production.

Avon's laboratories have had more than 60 years of experience in the manufacture of quality cosmetics and toiletries . . . experience for which there is no quick substitute. And it is that experienced treatment that keeps a quality product in the best company at the point of sale.

If your plans call for increased volume, why not at least explore the possibility of improving your quality!

Avon Products INC.

30 Rockefeller Plaza, New York 20, New York

STRATEGICALLY LOCATED PLANTS & LABORATORIES

Suffern, New York • Pasadena, California • Montreal, Canada

©

A Message
Regarding Delivery and Assay Methods of

CHLOROPHYLL

To take care of the constantly growing demand for Chlorophyll, we have continued to expand our facilities so that we are able to give immediate delivery of the entire 12 grades on our published price list with the single exception of one which is under government priority.

Our Water Soluble Chlorophyllin is assayed by the Spectrophotometric method. This is the method which has been used by American research investigators to determine quantitative requirements for the therapeutic results reported by many clinicians in the literature. Label statements of American products are based on this method.

Other methods of assay in common use in foreign countries, although they appear to give accurate ratios of the Chlorophyllin content, result in expressed values that are 100% to 150% higher than those found by the Spectrophotometric methods in common use in America. For example, our 4% Grade W shows 8% or higher when assayed by foreign methods.

In order to avoid confusion with other methods of assay and assist Chlorophyll users in proper evaluation of the product, we offer a free pamphlet, "METHODS OF CHLOROPHYLL ANALYSIS."

Send for your copy today

Yeast, Primary Grown
and Brewers Type
Vitamin D_2 and D_3

CHARLES BOWMAN & CO.
220 East 42nd Street, New York 17, N. Y.

Sole distributor for American Chlorophyll, Inc.

Want a Best Seller ?...

A HAPPY BLENDING of fragrance for your product might well produce an outstanding *sales* success story. Do what America's leading manufacturers have done—consult with Naugatuck Aromatics. You'll find a perfect combination of skill, experience and resources to help you with any perfuming problem.

Our chemists and perfumers can show you how to re-odor numerous types of manufactured items. They can help you add a neutral tone to almost any finished product. *Or* they can blend the one, distinctive fragrance that will help your product become a *best* seller.

Write, or call us—soon!

NAUGAROMES—For various industrial and commercial uses.

SOAPOLS—For bar, paste and liquid soaps.

SHAMPAROMES—For liquid, cream and paste shampoos.

MODERN BASES—For fine perfumes, colognes, toilet waters, toilet preparations, etc.

CREAMODORS—For all types of creams and lotions.

NAUGATUCK ⊛ AROMATICS

DIVISION OF UNITED STATES RUBBER COMPANY

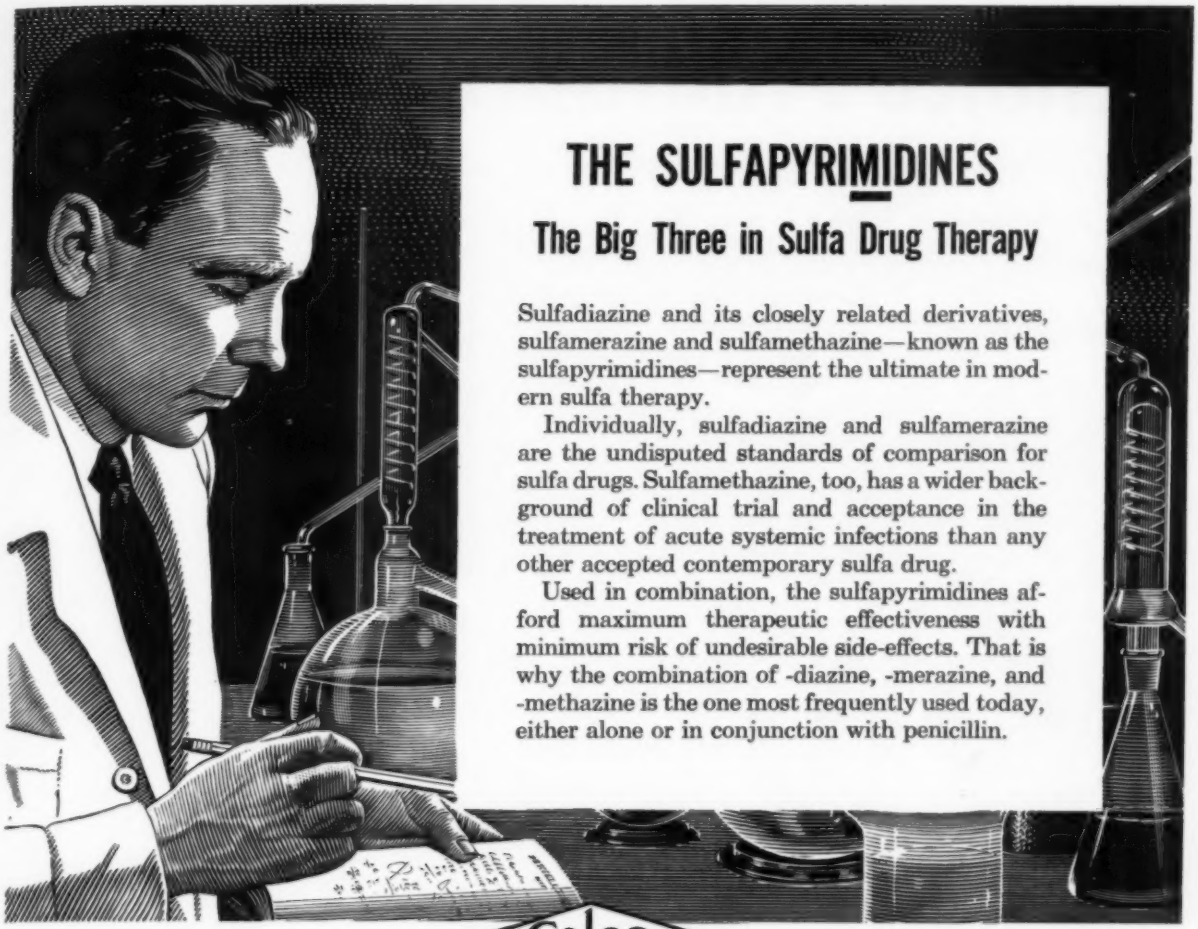
254 Fourth Avenue, New York 10, N. Y.— 701 South La Salle Street, Chicago 5, Ill.

Toronto— Montreal

Sole Distributors for:

BRUNO COURT, S. A., GRASSE, FRANCE

MANUFACTURERS OF AROMATIC CHEMICALS—IMPORTERS OF ESSENTIAL OILS



THE SULFAPYRIMIDINES

The Big Three in Sulfa Drug Therapy

Sulfadiazine and its closely related derivatives, sulfamerazine and sulfamethazine—known as the sulfapyrimidines—represent the ultimate in modern sulfa therapy.

Individually, sulfadiazine and sulfamerazine are the undisputed standards of comparison for sulfa drugs. Sulfamethazine, too, has a wider background of clinical trial and acceptance in the treatment of acute systemic infections than any other accepted contemporary sulfa drug.

Used in combination, the sulfapyrimidines afford maximum therapeutic effectiveness with minimum risk of undesirable side-effects. That is why the combination of -diazine, -merazine, and -methazine is the one most frequently used today, either alone or in conjunction with penicillin.

Calco

★ ★ **BULK PHARMACEUTICALS** ★ ★

Sulfadiazine U.S.P.*
. . . Sulfa Drug of Choice
Sulfamerazine U.S.P.*
Sulfanilamide U.S.P.
Sulfathiazole U.S.P.*
Sulfapyridine N.F.*
Sulfabenzamide*
Sulfaguanidine U.S.P.
Sulfamethazine
Aminoacetic Acid N.F.
Bishydroxycoumarin U.S.P.
Calcium Pantothenate (Dextro)
Choline Chloride
Choline Tri Citrate
Choline Dihydrogen Citrate
Choline Bitartrate
Cinchophen N.F.*
Folic Acid U.S.P.
Neocinchophen U.S.P.
Methylene Blue U.S.P. (powder and crystal)
Nicotinic Acid U.S.P.
Nicotinamide U.S.P.
*and sodium salt
Nicotinamide HCl
Para Aminosalicylic Acid*
Phenothiazine N.F. (regular and drench grades for veterinary use)
Propylthiouracil U.S.P.
Pyridoxine HCl
Riboflavin U.S.P.
Certified Colors for Pharmaceutical Use

In keeping with long-established policy, the above products are offered to ethical Pharmaceutical and Veterinary Manufacturers only.

AMERICAN Cyanamid COMPANY

PHARMACEUTICAL DEPARTMENT • CALCO CHEMICAL DIVISION
BOUND BROOK, N. J.

CALCO CHEMICAL DIVISION • AMERICAN CYANAMID COMPANY
1705 Locust Street, St. Louis 3, Missouri

CALCO CHEMICAL DIVISION • AMERICAN CYANAMID COMPANY
2472 East 8th Street, Los Angeles 21, California

CALCO CHEMICAL DIVISION • AMERICAN CYANAMID COMPANY
228 North La Salle Street, Chicago 1, Illinois

REPRESENTED IN CANADA BY CALCO CHEMICAL DIVISION • NORTH AMERICAN CYANAMID, LIMITED
P. O. Box 10, St. Lambert, Montreal 23, P. Q. • Royal Bank Bldg., Toronto, Ontario

Choice Fragrances

. . . FROM A CHEMIST'S "GARDEN"

Chemical Research works many miracles in simulating Nature. From Verona's laboratories, for example, come pure, stable and lasting aromatic chemicals that realistically reproduce the appealing fragrances of garden flowers in bloom. Verona perfume and cosmetic specialties are as *carefully cultivated* as the choicest flowers to add fresh notes of distinction to *your* products.

SOLE AGENT IN THE U.S.A. FOR J. & E. SOZIO, GRASSE, FRANCE

VERONA SPECIALTIES:

AMUSKAL
AMBRE 342
ALDEHYDE E-317A
OPOPONAX AMBRE E-392
IONONES
CYCLAMAL

RESINOIDES:

MOUSSE DE CHENE ABSOLUTE
OLIBANUM
OPOPONAX
STYRAX
TOLU
MOUSSE DE CHENE BRUT

VERONA CHEMICAL COMPANY, 26 VERONA AVE., NEWARK, N. J.

AROMATICS **VERONA** DIVISION

4 reasons why

SCHERING'S

SULFACETIMIDE

belongs in your triple sulfonamide mixture:

1

Sulfadiazine and sulfamerazine deserve first and second places respectively as components of any sulfonamide mixture. Of the four remaining drugs sulfacetimide appears the most advantageous for third place.[1]

2

The combination of sulfadiazine-sulfamerazine-sulfacetimide represents a highly satisfactory sulfonamide mixture because of its *low toxicity*, excellent tissue distribution and *good therapeutic efficiency*.[2]

3

The lower cost of SULFACETIMIDE affords the manufacturer a higher gross profit.

4

SULFACETIMIDE is accepted for inclusion in N.N.R. by the Council on Pharmacy and Chemistry of the American Medical Association.

BIBLIOGRAPHY

1. Lehr, D.: Scientific Exhibit, Atlantic City Session, American Medical Association, June 6-10, 1949.

2. Lehr, D.: New York State J. Med. *50*:1361, 1950.

Schering CORPORATION • BLOOMFIELD, N. J.

SCHERING

says the professor

HOOK 'EM WITH A BETTER SMELL ON THE END OF YOUR LINE!

Knowingly-scented bait will catch more fish... in more ways than one! For the product that *smells* better *sells* better... whether it be face cream or foot powder... nail polish or vitamin preparations... toothpaste or hair tonic.

No matter what your perfuming problem, you'll find it profitable to consult the technical department of MAGNUS, MABEE & REYNARD, INC. As one of the world's great suppliers of Essential Oils, Flavors and Perfuming materials, MM&R has had more than a half century of specialized experience in creating individualized odor — *or flavor* — personalities for every type of product.

Our facilities are available to you without obligation. Call on MM&R now!

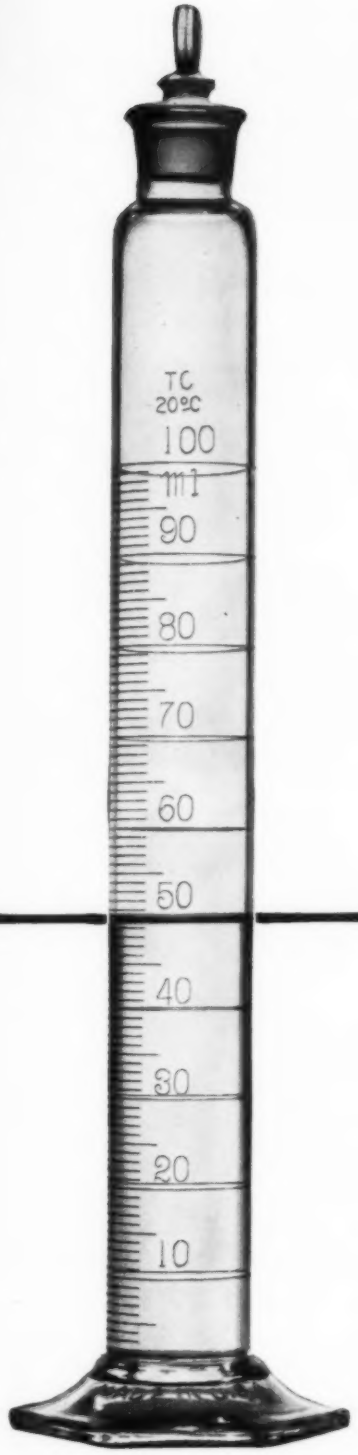
BUILDERS OF PRODUCT PREFERENCE through QUALITY ESSENTIAL OILS, PERFUMING MATERIALS and CONCENTRATED FLAVORS SINCE 1895

MAGNUS, MABEE & REYNARD, INC.

SINCE 1895 ... ONE OF THE WORLD'S GREATEST SUPPLIERS OF ESSENTIAL OILS

16 DESBROSSES STREET, NEW YORK 13, N. Y. • 221 NORTH LASALLE STREET, CHICAGO 1, ILL.

LOS ANGELES: BRAUN CORP. • SEATTLE, PORTLAND, SPOKANE: VAN WATERS & ROGERS, INC. • SAN FRANCISCO: BRAUN-KNECHT-HEIMANN CO.



more vitamin E

in less room

at low cost

IF you make vitamin E preparations, you face the problem of packing the increased quantities now in demand into the least volume of oil. If you also want to do it at low cost, you can turn now to DPi's new Distilled Vitamin E Concentrate, Type 6-50.

This high potency vitamin E concentrate contains 500 milligrams of *d*-alpha-tocopheryl acetate per gram—equivalent to 680 International Units of Vitamin E. You get it at the lowest price per International Unit of any vitamin E on the market today.

At the same price per International Unit, DPi continues to supply Distilled Vitamin E Concentrate, Type 6-25, containing 250 milligrams of *d*-alpha-tocopheryl acetate per gram.

For complete data, write ***Distillation Products Industries,*** 791 Ridge Road West, Rochester 3, N. Y. (Division of Eastman Kodak Company). Sales offices: 570 Lexington Avenue, New York 22, N. Y. • 919 North Michigan Avenue, Chicago 11, Ill. • Gillies & Loughlin, Los Angeles and San Francisco • Charles Albert Smith, Ltd., Montreal and Toronto.

leaders in research and production of vitamin A and vitamin E

DPi

Also . . . high vacuum equipment . . . distilled monoglycerides . . . more than 3400 Eastman Organic Chemicals for science and industry

ONLY EMERY GIVES YOU...

a premium quality stearic acid at "regular-quality" prices!

HIGHEST OXIDATION STABILITY

GREATEST RESISTANCE TO RANCIDITY

SUPERIOR COLOR AND HEAT STABILITY

LOWEST IODINE VALUE

GREATER PURITY

LOWEST PEROXIDE VALUE

Emersol 132 will improve your products *without increasing your costs!*

Here is an exceptionally pure crystalline stearic acid (1.0 maximum iodine value) whose quality and value exceed all triple-pressed grades in every respect . . . yet sells at triple-pressed prices!

The exclusive, outstanding characteristics of Emersol 132 reflect in higher end-product quality . . . higher purity, lighter color, greater resistance to rancidity, and increased oxidation stability . . . all at no extra cost.

Buy this premium stearic acid today . . . see how it will make your products better, stay better longer.

NEW... "EXTRA-FINE" POWDER

In addition to the standard cake and flake form, Emersol 132, like all Emery Stearic and Palmitic Acids, is now available in a new "Extra-Fine" Powder, the smallest particle size available.

For complete information on all Emersol Stearic and Palmitic Acids, write for comprehensive bulletin, "Emery Solid Fatty Acids."

EMERY INDUSTRIES, INC.

Carew Tower, Cincinnati 2, Ohio

Export Dept.: 5035 R. C. A. Bldg., New York 20, New York

Branch Offices
3002 Woolworth Bldg., New York 7, N. Y.
221 N. La Salle Street, Chicago 1, Illinois
187 Perry St., Lowell, Mass.
401 N. Broad St., Philadelphia 8, Pa.
420 Market St., San Francisco 11, Calif.

Representatives
Schibley & Ossmann, Inc., 33 Public Square, Cleveland 13, Ohio
Ecclestone Chemical Co., 2673 Guoin, Detroit 7, Michigan
Warehouse stocks also in St. Louis, Buffalo and Baltimore

BETTMANN ARCHIVE

do you need a better FILM FORMER?

try METHOCEL *...a superior synthetic gum!*

Wherever filming properties are desirable, Methocel (Dow Methylcellulose) is ideal for use in many cosmetic and pharmaceutical products.

In burn therapy, for example, Methocel solutions form a tough, pliant film over skin tissues when applied either as a spray or as an ointment. Other ointments, such as those for surgical use or for skin infections, can be improved with Methocel. Not only does it serve as a film former, but also as a thickener, binder, emulsion stabilizer and suspending agent.

For cosmetics, such as hand lotions and make-up preparations, Methocel makes a smooth, pure, uniform film that is inert and harmless.

Another interesting application of Methocel is as a laxative. Since it is a bland, neutral, water-soluble, inert colloid, it is an ideal choice as a bulk laxative. It is easy to ingest, has no seeds or granules, no caloric value and is not habit-forming.

Methocel is a chemical of ever-growing usefulness to the drug and cosmetic industry. If you have not yet tried *powdered* Methocel, we will gladly send you a free, experimental sample. Write Dept. ME-114, stating viscosity desired and potential application.

THE DOW CHEMICAL COMPANY

MIDLAND • MICHIGAN

DOW CHEMICALS
INDISPENSABLE TO INDUSTRY AND AGRICULTURE

Build Your New
"Important-All-Year" Product with this Favorite Antihistaminic

IF YOU ARE considering marketing your own antihistaminic preparation you will prefer to employ an antihistamine which has *proved* its outstanding advantages. The material of your choice must combine *exceptionally high antihistaminic potency with a high index of safety.* Its properties must assure you that it will be *effective in a large variety* of allergic conditions. Also, the antihistaminic substance must be *extremely versatile,* suitable for formulation in any desired pharmaceutical form.

... And all of these qualities must have been established in laboratory, clinic, and everyday practice!

That is why you will prefer Pyrilamine Maleate Merck

PROVED highly effective and safe in extensive clinical tests.
DESCRIBED in the published reports of many allergists.
PRESCRIBED by thousands of physicians from coast to coast.
FAVORED by physicians and patients in every season of the year.

Wide Range of Process Data Available

Pyrilamine Maleate Merck offers you the ideal means of marketing effective antihistaminic products under your own label. Process information is available on Pyrilamine Maleate preparations in any of the following forms:

Tablets (including combinations with A.P.C.)
Syrups • *Creams*
Lotions (e. g., calamine-base type)
Ointments (petrolatum or water-soluble base)
Ophthalmic Solutions • *Nasal Solutions*
Injectable Solutions

We shall be pleased to furnish samples for experimental use and to assist you in any technical problems involved.

MERCK & CO., INC.
Manufacturing Chemists
RAHWAY, NEW JERSEY

The Expanding Role of Antihistaminic Therapy

... in many instances, nasal symptoms attributed to the common cold are in reality due to allergic rhinitis ...

... manifestations of an ordinarily nontroublesome allergic rhinitis may be aggravated by a superimposed common cold ...

Clinicians' statements, such as these, serve to emphasize the growing year 'round importance of antihistaminic therapy. Whether intended for the relief of allergic symptoms in *perennial* or in *seasonal* allergies—antihistaminic preparations have become one of the most important product groups in the pharmaceutical field.

MERCK

Pyrilamine Maleate Merck

(Formerly called Pyranisamine Maleate)

a brilliant achievement in synthesis...

FELTON'S OTTO OF ROSE ALTERNATE F.C.

Never before has anyone succeeded in producing synthetically *all* of the full, rich, characteristic notes of true otto of rose. While most of the constituents of otto of rose have been known for many years, and while many good simulations have been made, true reproduction of the natural product has never been achieved before. Felton's achievement is the discovery and synthesis of those very important but elusive constituents present in minute quantities in Bulgarian otto of rose, and this development has enabled our perfumers to create the remarkably authentic *Otto of Rose Alternate F.C.*

AROMATICS • PERFUME BASES • ESSENTIAL OILS

FELTON CHEMICAL CO., INC.

599 Johnson Avenue, Brooklyn 6, N. Y.

PLANTS: Brooklyn, N. Y. • Los Angeles, Cal. • Montreal, Que. • Paris, France

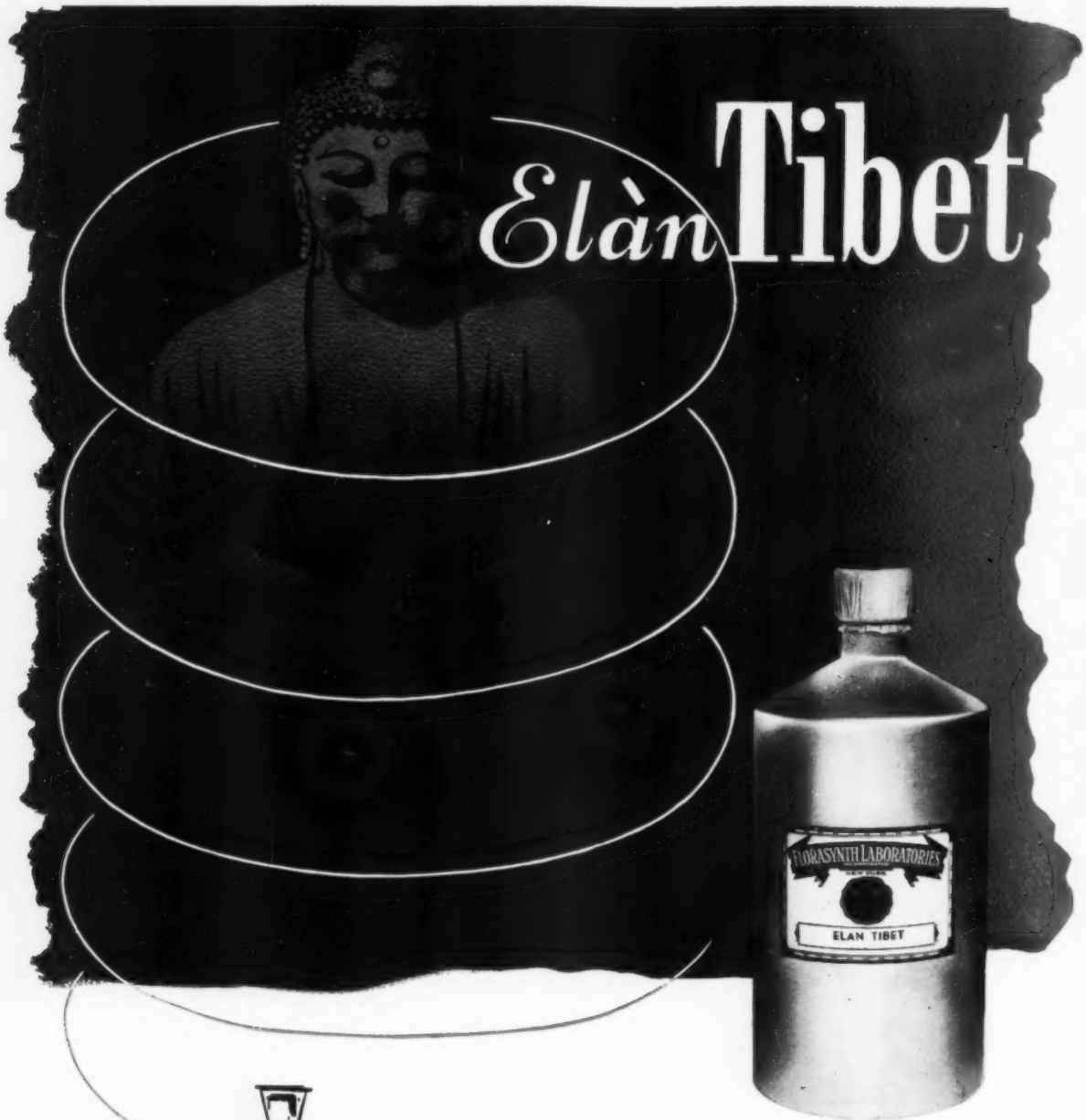
SALES OFFICES: Atlanta • Boston • Chicago • Dallas • Philadelphia • St. Louis • Toledo • Toronto

Stocks Carried in Principal Cities

a special message to perfumers . . .

Full revelation of its superb qualities will only come to you from study of OTTO OF ROSE ALTERNATE F.C. It is *the* replacement or extender for Bulgarian otto of rose regardless of cost, and its reasonable price is equally amazing.

FOR SAMPLE AND QUOTATION . . .
write your name, title & address here & send it to us.



Floral creation of unusual intriguing odor... suggestive of the subtle charm and mystery of the native background with an appealing character that lends delicate bouquet to toilet waters and perfumes.

Samples upon request

Florasynth LABORATORIES INC.

CHICAGO 6 · **NEW YORK 61** · LOS ANGELES 13

DALLAS 1 · DETROIT 2 · MEMPHIS 1 · NEW ORLEANS 13 · ST. LOUIS 2 · SAN BERNARDINO · SAN FRANCISCO 11

FLORASYNTH LABS. (CANADA) LTD.—MONTREAL · TORONTO · VANCOUVER · WINNIPEG · FLORASYNTH LABORATORIES DE MEXICO S. A., MEXICO CITY

Creative Perfumery

sells your products

Creative Perfumery is the art and science of producing the correct, the perfect fragrance for any given product. More . . . **Creative Perfumery** is the dynamics of Fragrance applied to modern merchandising for easier selling . . . for more satisfied customers. With original notes, subtle compositions and imaginative harmonies **D&O Creative Perfumery** can become a compelling and successful factor in your Sales picture. Consult D&O.

DODGE & OLCOTT, INC.
180 Varick Street • New York 14, N. Y.

ATLANTA • BOSTON • CHICAGO CINCINNATI • DALLAS • LOS ANGELES • PHILADELPHIA • ST. LOUIS • SAN FRANCISCO
ESSENTIAL OILS • AROMATIC CHEMICALS • PERFUME BASES • VANILLA • FLAVOR BASES

Glamorous Hands Around the World...

DURLIN is the Foremost Name in **BULK NAIL ENAMEL**

catering to the leading class packagers the world over.

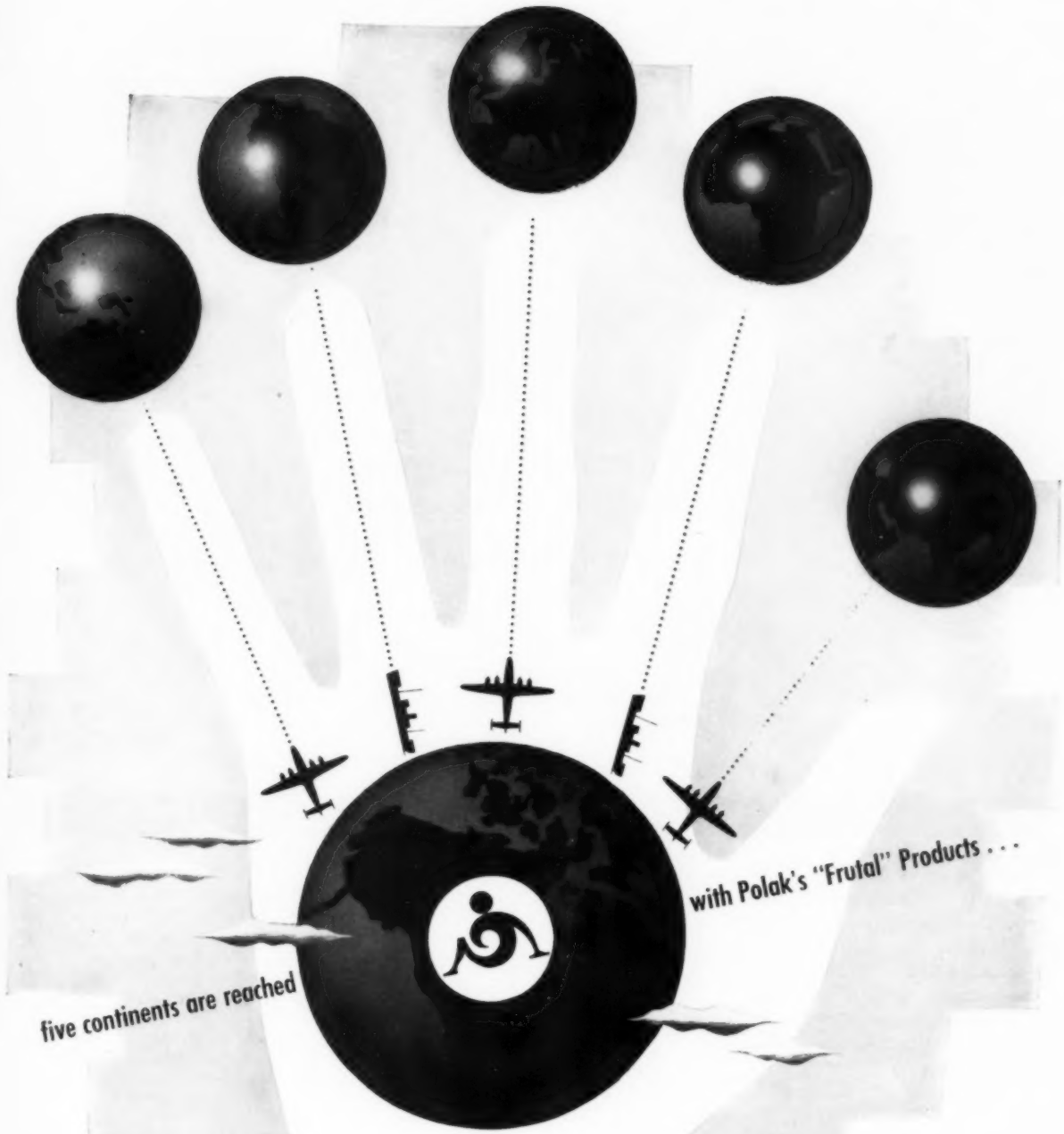
Durlin is first in quality, first in fashion-right colors,

first in technical and packaging service.

glamorous hands *around the world...*

DURLIN CO.

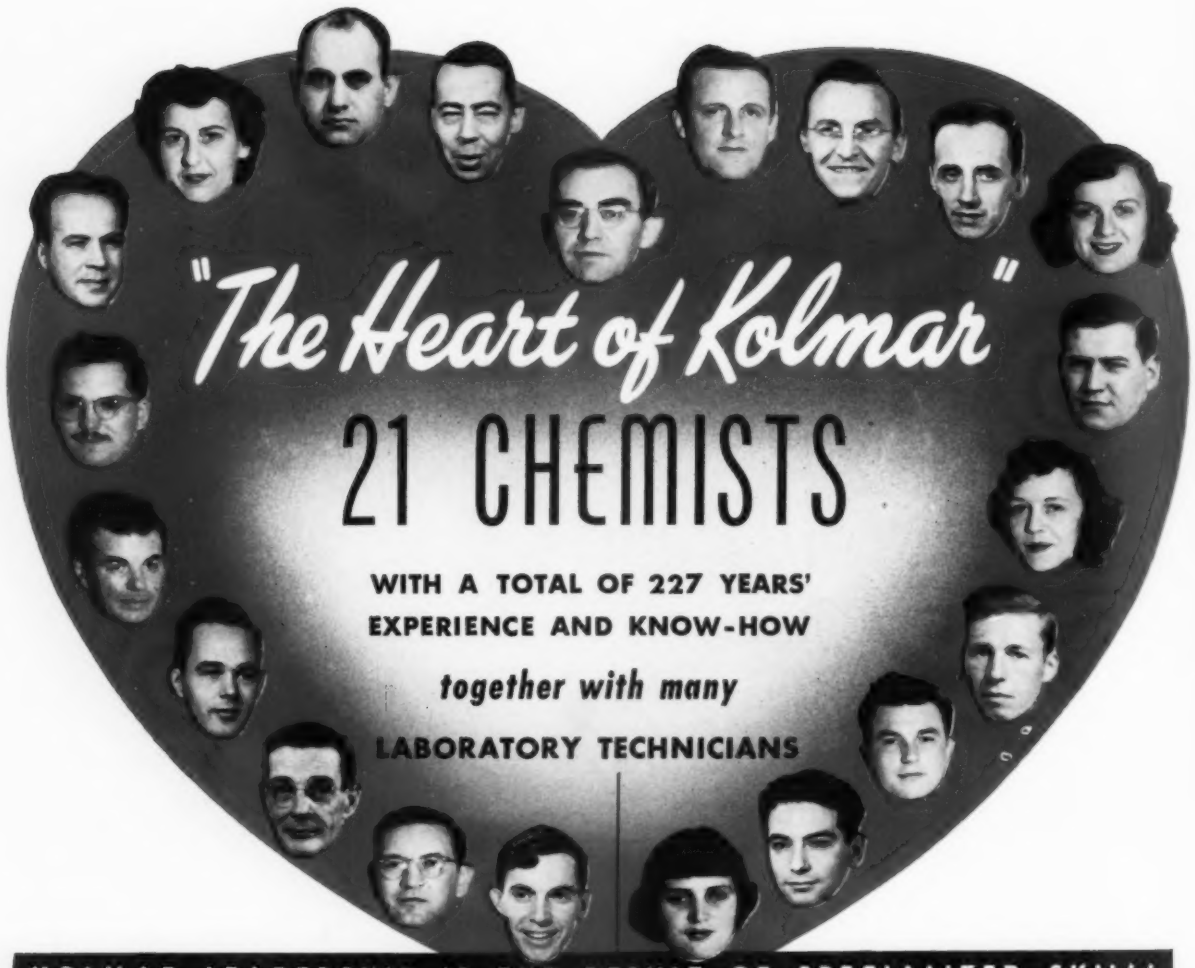
744 BROAD STREET
NEWARK 2, NEW JERSEY
Cable Address: Durlin Newark Newjersey



represented in all principal cities
in the United States
and throughout the world

Polak's Frutal Works *MIDDLETOWN, N. Y.*

ESSENTIAL OILS • PERFUME BASES • AROMATIC CHEMICALS


"The Heart of Kolmar"
21 CHEMISTS
WITH A TOTAL OF 227 YEARS' EXPERIENCE AND KNOW-HOW
together with many
LABORATORY TECHNICIANS

KOLMAR LEADERSHIP IS THE RESULT OF SPECIALIZED SKILL!

♥ The "Heart of Kolmar" provides continuous creative research and thorough testing at every step of the manufacturing process . . .

♥ It provides the control of quality from raw material to finished product . . .

♥ It has given Kolmar product superiority and uniformity, combined with favorable price . . .

♥ It has enabled Kolmar to develop many of the best known products in the cosmetic field . . .

♥ It constantly works for the improvement of existing methods and formulae, and the development of new ones.

♥ It has won Kolmar recognition *as America's Leader in Private Label Cosmetics.*

The customer's rights in the formula under which he operates is always respected by Kolmar. Consultation will not obligate you and there's a Kolmar Laboratory or Representative near to give you prompt service at all times.

•

Kolmar Products include Lipstick, Dry and Cream Rouge, Loose Face Powder, Cake Make-Up, Compact Powder, Foundation Creams, Liquid Make-Up, Eye Shadow, Mascara, Lotions, Colognes, Perfumes and other cosmetics.

•

REPRESENTATIVES: DOUGLAS HAGGERTY, EASTERN SALES MANAGER, THOMAS LA PRELLE, EMPIRE STATE BUILDING, ROOM 605, NEW YORK, N. Y.; WARREN M. CURRY, 140 WALKER ST., S. W., ATLANTA 3, GA.; NORMAN KOLE, 419 MERCHANDISE MART, CHICAGO, ILL.; J. C. WEILER, 8003 FORSYTHE BLVD., ST. LOUIS 5, MO.; R. F. G. BYINGTON, 1260 N. WESTERN AVENUE, LOS ANGELES, CALIF.; RICHARD F. SPICKER, 419 WEST FIFTH ST., CINCINNATI, OHIO; ELMER J. SCHWARTZ, 10016 E. 35th TERRACE, KANSAS CITY 3, MO.

Kolmar LABORATORIES

MILWAUKEE 2, WISCONSIN

PRIVATE LABEL COSMETICS EXCLUSIVELY

KOLMAR COSMETIC SPECIALTIES, INC. (complete package division) • KOLMAR INTERNATIONAL, INC. • WICKHEN PRODUCTS, INC.

PLANTS IN PORT JERVIS AND ELLENVILLE, NEW YORK; TWO LARGE PLANTS IN MILWAUKEE, WIS., AND ONE IN HOLLYWOOD, CALIF.
CANADA: KOLMAR WILCKENS, LTD., PLANT IN OAKVILLE, ONTARIO; OFFICE: 205 YONGE ST., TORONTO, ONT.
AUSTRALIA: KOLMAR (AUST.) PTY. LIMITED, 494 KENT ST., SYDNEY

Uniformity

THE RENOWNED "ROCKETTES"
Epitome of Uniformity in Dancing
as they appear on
The World's Largest Stage
Radio City Music Hall

ansbacher-siegle Colors

Unequalled uniformity of design-in-motion has produced this greatest line of rhythm and beauty in all of show business; and there can be no doubt that the greatest line in the pigment color business is also the result of time-tested proven uniformity produced by *ANSBACHER-SIEGLE CORPORATION.*

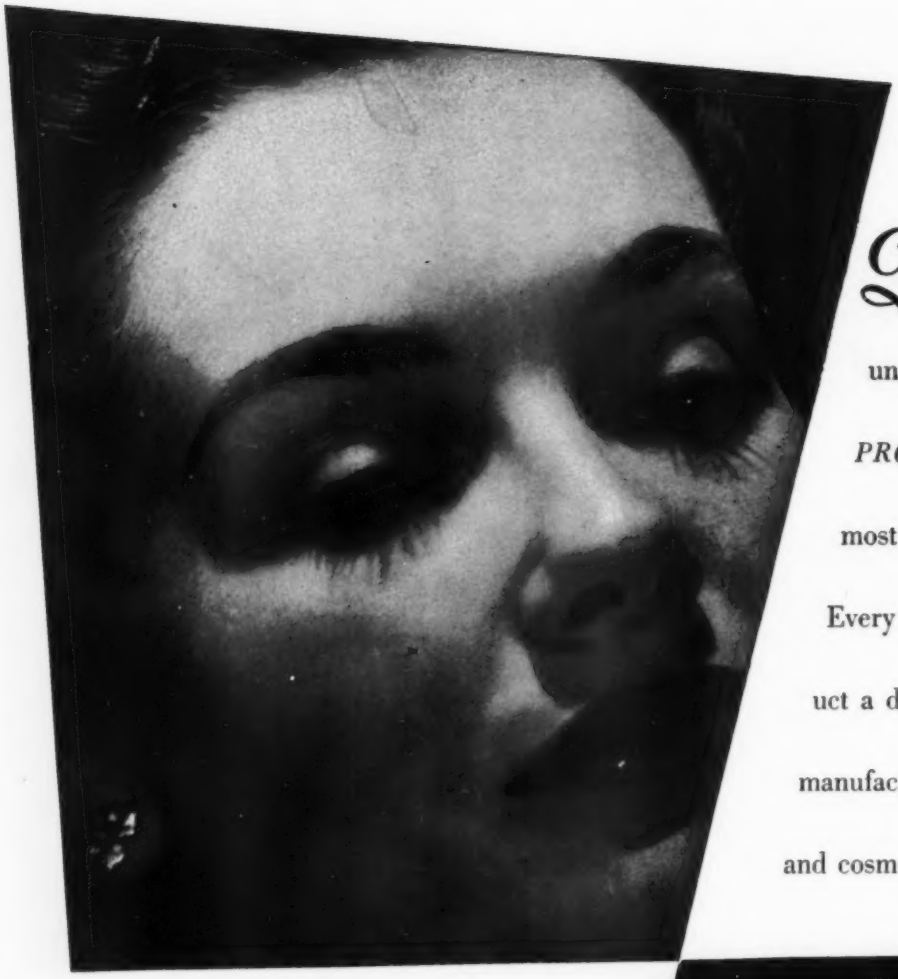
When you use *A-S COLORS* you can relax. You can depend on their quality and uniformity. They are guaranteed by years of accumulated experience and skill in the constantly expanding science of compounding colors for cosmetics.

EXPERT COLOR CONSULTANTS are available to assist you with any color problem — without cost or obligation.

RIDE the RAINBOW with... ANSBACHER - SIEGLE CORPORATION

COLOR CRAFTSMANSHIP SINCE 1856

General Offices, Factory and Laboratories • Rosebank, Staten Island 5, New York



QUALITY based on unceasing research . . . *PRODUCTION* under the most exacting control . . . Every *SYNTOMATIC* Product a distinctive asset in the manufacture of your perfumes and cosmetic preparations.

AROMATICS

ESSENTIAL OILS

PERFUMERS MATERIALS

SYNTOMATIC CORPORATION

SYNTOMATIC CORPORATION

114 EAST 32nd STREET • NEW YORK 16, N. Y. • MURRAY HILL 3-7618

Have YOU hit the JACKPOT Yet?

	Yes	No
ARE YOU FAILING TO GET your full share of increased cosmetic sales?	☐	☐
DO YOU FIND YOUR COSTS changing daily due to price fluctuations in the natural flower oil market?	☐	☐
ARE YOU INTERESTED IN synthetic base materials—consistent in quality and stable in price—that will heighten and increase the foundation of your compositions?	☐	☐

If your answer is yes to any of these questions it is time to use PENICK'S ABSOLUTE ALTERNATES. Inquire for samples of:

- **ABSOLUTE JASMIN EXTRACTION ALTERNATE No. 7583** . . . . . **$16.50 lb.**
- **ABSOLUTE ROSE de MAI ALTERNATE No. 7584** . . . . . **18.25 lb.**
- **ABSOLUTE TUBEROSE ENFLEURAGE ALTERNATE No. 7585** . . . . . **15.00 lb.**

Your JACKPOT will be:

increased sales, greater profits, and satisfied customers.

S. B. PENICK & COMPANY

50 CHURCH STREET, NEW YORK 7, N. Y.
Telephone COrtlandt 7-1970

735 WEST DIVISION STREET, CHICAGO 10, ILL.
Telephone MOhawk 4-5651

DISTILLERS OF RARE AND QUALITY ESSENTIAL OILS—MANUFACTURERS OF AROMATIC CHEMICALS

TOUCH OF GENIUS

Perfume is the one touch that completes the picture. She buys the perfume that provides the effect she seeks, complements her mood, her personality. This mood, this effect, this personality . . . the accomplished perfume chemist forsees her wants and, with his touch of genius, and innate skill builds them into his creation.

The French Touch

The French touch is not foreign to us. van Ameringen-Haebler S. A. R. L. is developing and producing perfume materials in our plant in Puteaux, just outside of Paris. This European operation expands our ability and experience and, consequently, our usefulness to American perfume manufacturers.

The van Ameringen-Haebler perfume chemists can help YOU create, for HER, the fragrance . . . . the effect, the touch she wants.

MANUFACTURERS AND CREATORS OF THE FINEST PERFUME MATERIALS

van ameringen · haebler, inc.

MEMBER • FRAGRANCE FOUNDATION

521 WEST 57th STREET
NEW YORK 19, N. Y.

now . . . a new safeguard for your products

the super-refined qualities of PENN-DRAKE WHITE OILS *are "locked-in"*

In the manufacture of Penn-Drake White Oils, the finest possible crude oil stock is refined to a point well beyond USP Specifications. At this, the highest point of purity, the quality is "locked-in" by the addition of a USP-approved stabilizer, which keeps Penn-Drake White Oils from deteriorating with age.

With the addition of this preservative, the life-time stability of Penn-Drake White Oils is assured. In your processing, shipment and storage—you can be positive that your finished products will *not* suffer because of base deterioration.

To safeguard the quality of your products, specify Penn-Drake, the super-refined White Oils with the "locked-in" stability.

penn drake products

PENNSYLVANIA REFINING COMPANY

GENERAL OFFICES: BUTLER, PENNSYLVANIA

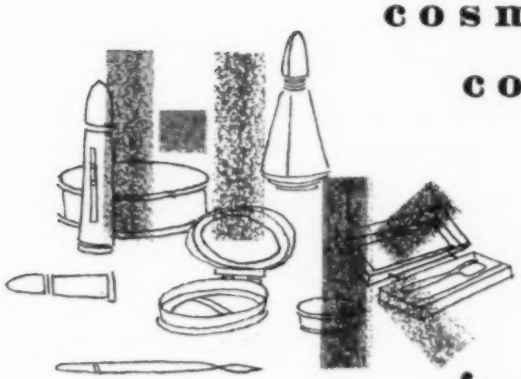
Refinery at KARNS CITY, PENNSYLVANIA

Branches:* Cleveland, Ohio; Edgewater, N. J.** ***Representatives in Principal Cities

MAKERS White Oils (U.S.P., N.F. and Technical), Petrolatums (all grades and colors); INSECTI-SOL (deodorized insecticide base); Deodorized and other Naphthas; Petroleum Sulfonates; Waxes; Industrial and Motor Lubricants and Greases; Fuel Oils, and other petroleum products.

ATLAS

cosmetic colors...



standard for the industry

greater eye appeal...greater buy appeal

Rely on H. Kohnstamm's hundred years of experience in fine color production.

Uniformity, brilliance, proper strength, particle size and adaptability, all combine to make Atlas Certified Colors first choice in the industry.

Are you working on a new shade or any knotty color problem? If so, write us today

100th *Anniversary*

FIRST PRODUCERS OF CERTIFIED COLORS

H KOHNSTAMM & COMPANY Inc.

ESTABLISHED 1851

89 PARK PLACE, NEW YORK 7 11-13 E. ILLINOIS ST., CHICAGO 11 4735 DISTRICT BLVD., LOS ANGELES 11

ATLANTA · BALTIMORE · BOSTON · CINCINNATI · CLEVELAND · DALLAS · DETROIT · HOUSTON · INDIANAPOLIS · KANSAS CITY, MO. · MINNEAPOLIS · NEW ORLEANS · OMAHA · PHILADELPHIA · PITTSBURGH · ST. LOUIS · SAN FRANCISCO

TIMELY SOLUTIONS TO P

FROM THE GIVAUDAN RI

special odors for aerosol bombs

With competition in aerosol dispensers steadily increasing—for insecticides, sprays, room deodorants, perfumes and other purposes—the right odor is becoming an increasingly important sales factor.

With many purchasers, odor is the *dominating* sales factor.

Givaudan has conducted a considerable amount of research in the development of special odors to meet the specific requirements of aerosol bombs for various purposes.

These odors are produced from the highly purified line of Givaudan aromatics.

A sample of your product, and information regarding its toxic or deodorant principle, will enable our laboratory to supply perfume oils that

1. will be completely soluble in aerosol solvents
2. will leave no sediment in the bombs
3. will not clog the very small valves
4. will not decompose
5. will not affect the properties of other ingredients

PRESSING PROBLEMS

RESEARCH LABORATORIES

essential oils that duplicate nature's best

(In everything but the cost!)

Givaudan's synthetic essential oils not only duplicate nature's best efforts, but surpass them in uniformity—at a cost far below the cost of natural oils. Why not profit by the independence and economy these Givaudan products offer you? We suggest:

for vetivert—VERTONE

Recommended for use with the natural in a mixture in which vetivert itself would be required in proportions as low as 10%. VERTONE blends extremely well with vetivert oil. The combination has remarkable lasting power and is excellent for use in soaps and in the perfuming of creams and powders.

for geranium—GERANIUM SYNTHETIC 1086

Recommended as a total replacement, particularly for geranium Bourbon whose deep floral odor is excellently reproduced.

—GERANIUM SYNTHETIC GIVCO

A very inexpensive geranium material whose note is closely similar to the Algerian oil.

for patchouli—PATCHOL

Lends itself harmoniously to blending with oil of patchouli. The combination is very stable in soap and will not induce discoloration.

Write for samples and full information on these and other timely Givaudan synthetic essential oils.

Greater Distinction through

Givaudan-Delawanna, Inc.

330 West 42nd Street, New York 18, N. Y.

Branches: Philadelphia • Boston • Cincinnati • Detroit • Chicago • Seattle • Los Angeles • Montreal • Toronto

Emulsifiers

Soapless, Neutral and Acid Emulsions

Tegacid.... Tested .. Trusted ..

Anti-perspirant-deodorant cream problems?

Tegacid.... Glyceryl Monostearate—Acid Emulsifying. For all greaseless, medicated formulations ointments, anti-perspirant deodorant creams and lotions.

Tegin..... Glyceryl Monostearate—Self Emulsifying. For neutral greaseless creams, lotions, ointments, suntan creams.

Tegin P.... Propylene Glycol Monostearate—Self Emulsifying. For greaseless creams—brushless shave, foundation, suntan: lotions — foundation, suntan, cosmetic stockings: ointments.

Tegin 515.. Glyceryl Monostearate—Non Self-Emulsifying. Used in conjunction with other auxiliary emulsifiers.

LANOLIN ABSORPTION BASES

PROTEGIN X—*For Nite Creams and Ointments.*
ISO-LAN—*For Creams, Lotions and Ointments.*

PRESERVATIVES

Esters of Parahydroxybenzoic Acid

TEGOSEPT M TEGOSEPT E TEGOSEPT P
BUTYL TEGOSEPT BENZYL TEGOSEPT

ANTIOXIDANTS

PROPYL GALLATE **ETHYL GALLATE**

Inhibit Rancidity, Preserve Flavor in Edible Fats

Complete Technical Data on Request

GOLDSCHMIDT

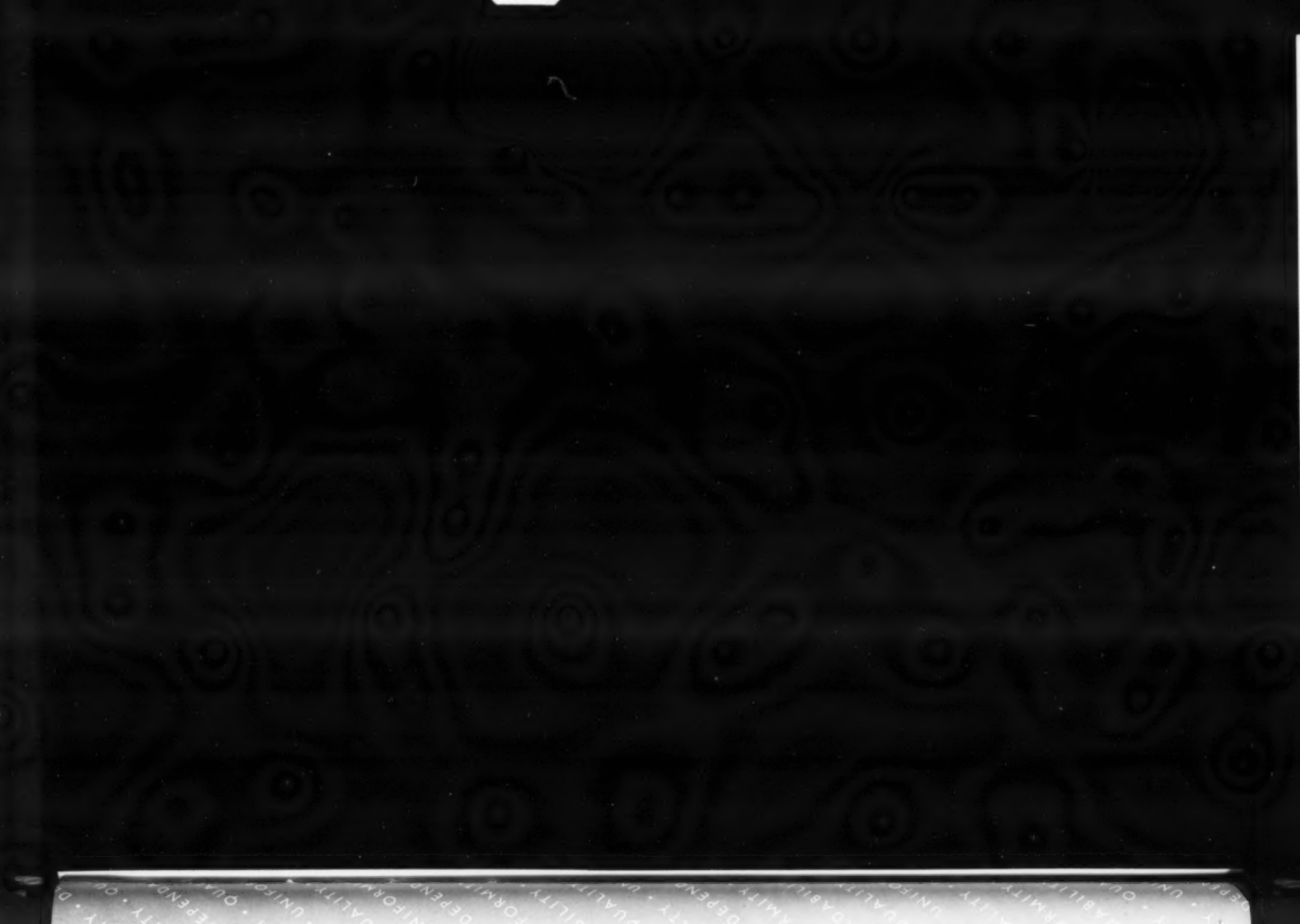
CHEMICAL CORPORATION

153 Waverly Place, New York 14, N. Y.

SERVING INDUSTRY FOR A QUARTER CENTURY

SALES REPRESENTATIVES

BOSTON · CHICAGO · LOS ANGELES · ST. LOUIS · MONTREAL · TORONTO



Columbia

SODIUM BICARBONATE

U.S.P.

Powdered or Granular
Noted for its purity, whiteness and uniform screen size

Whether you use Columbia Sodium Bicarbonate for compounding, repacking or a special application, you will find it ideally suited to your precise needs.

Manufactured according to rigid specifications, Columbia Sodium Bicarbonate equals or exceeds every U.S.P. standard. Pittsburgh Plate Glass Company, Columbia Chemical Division, Fifth at Bellefield, Pittsburgh 13, Pennsylvania.

COLUMBIA CHEMICALS

CHICAGO • MINNEAPOLIS • BOSTON
NEW YORK • CINCINNATI

ST. LOUIS • CHARLOTTE • PITTSBURGH
CLEVELAND • PHILADELPHIA

PAINT • GLASS • CHEMICALS • BRUSHES • PLASTICS

PITTSBURGH PLATE GLASS COMPANY

GLYCERINE

IMPORTANT FOR DRUGS...

...IMPERATIVE FOR NATIONAL DEFENSE!

In every hospital and as close to home as your corner drugstore, U.S.P. Glycerine and its derivatives work round the clock in the service of medicine and pharmacy. A vehicle, lubricant, emollient, solvent and vasodilator—Glycerine offers such an unusual combination of properties that no single substitute may be used to replace it in original formulas of the U.S. Pharmacopoeia!

—That explains why Glycerine has been included among the first 6 chemicals to be placed under inventory control*...

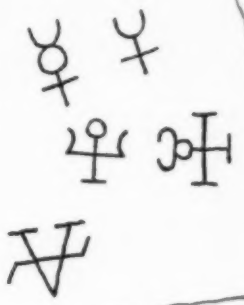
—and why it is sometimes not immediately available when lifesaving pharmaceuticals and biologicals, salves and ointments for the military must supersede civilian or non-critical requirements.

*By Government authorities responsible for inventory control under the National Defense Act.

GLYCERINE PRODUCERS' ASSOCIATION
295 Madison Ave., New York 17, N. Y.

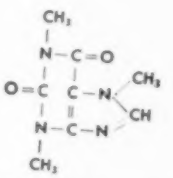
57 VARIATIONS

Ancient alchemists used 57 variations for mercury, all designed to represent the planet. A few of them are illustrated at the right.



NO VARIATION

The modern symbol for caffeine, anhydrous, U.S.P., always is the same. And, used along with the famous Monsanto trade-mark, it means caffeine of highest quality . . . uniform, never-varying quality.



CAFFEINE, ANHYDROUS, U. S. P. Specifications: White powder; loss on drying at 80° C., 0.25% max.; melting range, 235°-237.5° C.

Available in 100- and 25-pound fiber drums and in 10- and 5-pound boxes.

For information on Monsanto Pharmaceuticals, contact the nearest Monsanto Sales Office, or write MONSANTO CHEMICAL COMPANY, Organic Chemicals Division, 1700 South Second Street, St. Louis 4, Missouri.

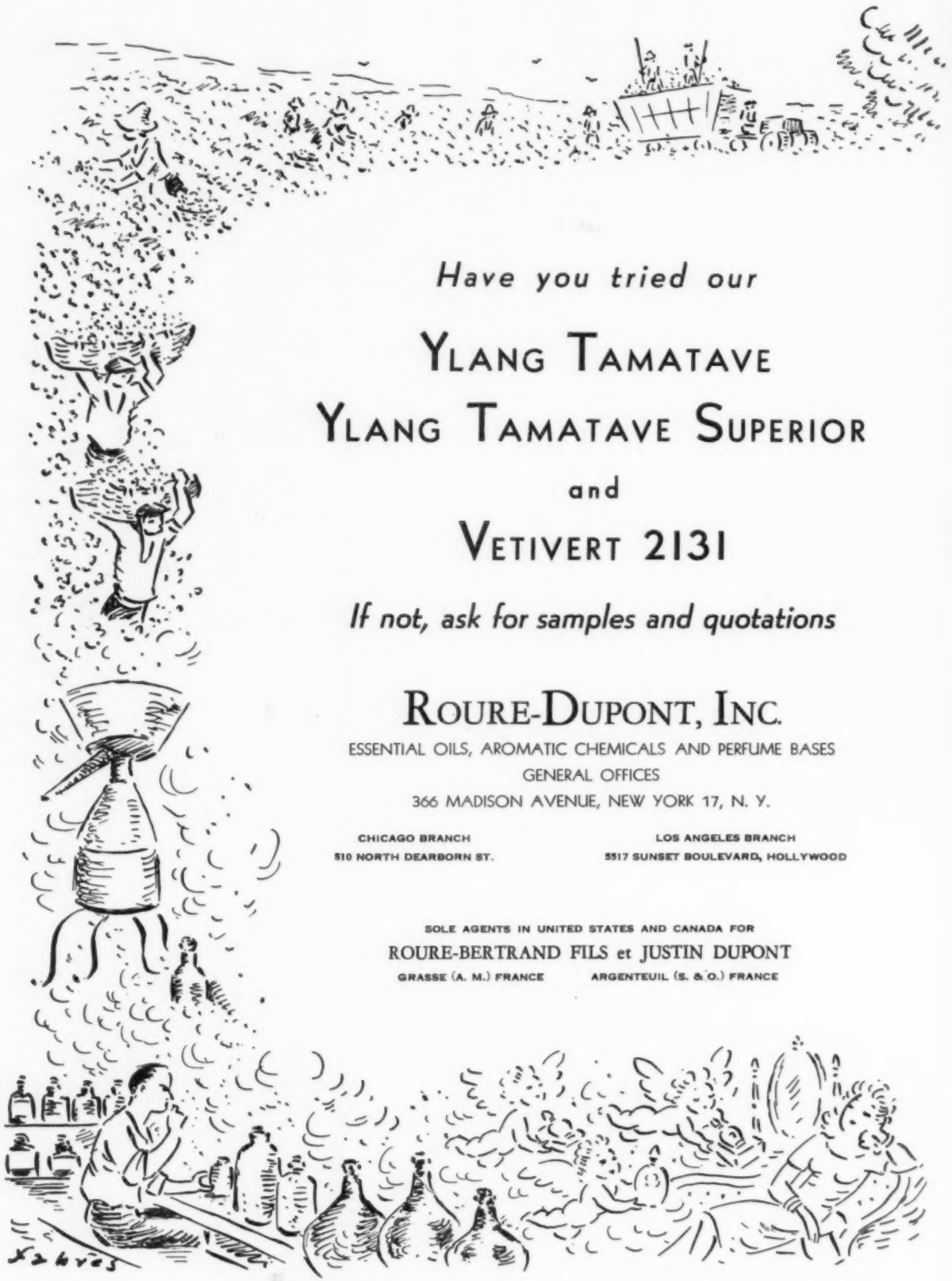
DISTRICT SALES OFFICES: Birmingham, Boston, Charlotte, Chicago, Cincinnati, Cleveland, Detroit, Houston, Los Angeles, New York, Philadelphia, Portland, Ore., San Francisco, Seattle. In Canada, Monsanto (Canada) Ltd., Montreal.

High-quality pharmaceuticals manufactured by Monsanto

Acetanilid, U.S.P.
Acetophenetidin, U.S.P.
Acetylsalicylic Acid, U.S.P. (Aspirin)
Benzoic Acid, U.S.P.
Benzyl Benzoate, U.S.P.
Caffeine, U.S.P.
Calcium Phosphate, Di
Chloral Hydrate, U.S.P.
Chloramine-T, N.F.
Ferric Phosphates
Glycerophosphates
Magnesium Phosphates
Methyl Salicylate, U.S.P.
para-Aminosalicylic Acid
Phenol, U.S.P.
Phenolphthalein, U.S.P.
Phosphoric Acid
Potassium Ammonium Phosphate
Saccharin, U.S.P.
Salicylic Acid, U.S.P.
Salol (Phenyl Salicylate)
Sodium Benzoate, U.S.P.
Sodium para-Amino Salicylate
Sodium Phosphate
Sodium Salicylate, U.S.P.
Sulfanilamide, U.S.P.

MONSANTO
CHEMICALS — PLASTICS

SERVING INDUSTRY . . . WHICH SERVES MANKIND



Have you tried our

YLANG TAMATAVE
YLANG TAMATAVE SUPERIOR

and

VETIVERT 2131

If not, ask for samples and quotations

ROURE-DUPONT, INC.

ESSENTIAL OILS, AROMATIC CHEMICALS AND PERFUME BASES

GENERAL OFFICES

366 MADISON AVENUE, NEW YORK 17, N. Y.

CHICAGO BRANCH
510 NORTH DEARBORN ST.

LOS ANGELES BRANCH
5517 SUNSET BOULEVARD, HOLLYWOOD

SOLE AGENTS IN UNITED STATES AND CANADA FOR

ROURE-BERTRAND FILS et JUSTIN DUPONT

GRASSE (A. M.) FRANCE — ARGENTEUIL (S. & O.) FRANCE

ROWAG

VACUUM
DEODORIZED

TRIPLE A

QUALITY
LANOLIN
for
QUALITY
COSMETICS

Put that "plus value" into your products with ROWAG vacuum deodorized AAA —the lanolin that puts quality into cosmetics without increasing costs.

ROWAG vacuum deodorized AAA lanolin is the finest available—light in color, clean in odor, and glossy in texture. A powerful emulsifier, emulsion stabilizer and skin emollient with a consistently high cholesterol content—15% to 17%.

Write for samples and see for yourself why ROWAG vacuum deodorized AAA is *the lanolin* preferred by many leading cosmetic manufacturers.

ROBINSON WAGNER CO., INC.

Leaders in Lanolin Research and Development

110 EAST 42nd STREET • NEW YORK 17, N. Y.

Cable Address: "ROWAG" • *Plant:* MAMARONECK, N. Y.

Wanted:

I want a job selling perfumes and cosmetics.

I know the cities and towns where these products are sold in worthwhile volume, where all the capable, energetic retail sellers of cosmetics are located, and where the sales expense of calling will return a profit.

When I enter the store of any of these retailers, I am sure of a welcome based on long, friendly associations. I know the folks who do the buying; more important I know the folks who do the selling. I know how to get the attention of these folks, how to get my story over without stepping on anyone's toes.

I want to do more than just send you an order which would only mean that your goods are at rest in that store. I like to sell and my idea of selling is to keep your goods moving through the store to Miss and Mrs. Public.

I would expect you to give me a clear, concise story of your product—its quality, competitive advantages and selling points. I would need to know your advertising program, so that I can build up in the mind of these retail folks the expectation of substantial consumer interest. I want also to know about your company policies so that I can win friendly admiration for your products and your company.

I can sell perfumes and cosmetics because I know the people who in turn sell them to the public.

Let me carry the kind of message which encourages retail display for your product and friendly, informed selling behind the counter and you will soon see results in increased retail orders.

I have been selling perfumes and cosmetics for over 33 years. Any good retailer will give you a reference.

My name is BEAUTY FASHION:

Do you need a top-notch, tested, retail salesman?

American distilled Oils

PRODUCED AT OUR BROOKLYN FACTORY

OILS

CLOVE
NUTMEG
ORRIS LIQUID, Conc.
STYRAX
CASCARILLA
BALSAM PERU
CELERY
GERANIOL
CITRONELLOL
OPOPONAX
PIMENTO
OLIBANUM
SANDALWOOD
PATCHOULY

also

LINALOOL **CITRAL** **EUGENOL** **RHODINOL**

RESIN LIQUIDS

OLIBANUM
LABDANUM
OPOPONAX
ORRIS
STYRAX
BALSAM PERU
BALSAM TOLU
TONKA

Essential Oils • Aromatic Chemicals
Perfume Materials • Colors

OFFERING ROSE ABSOLUTE

GEORGE LUEDERS & CO.

427 WASHINGTON STREET, NEW YORK 13, N. Y.

CHICAGO · SAN FRANCISCO · MONTREAL · [illegible] · PHILADELPHIA · LOS ANGELES · TORONTO

ESTABLISHED 1885

Tablet coating

BY RONALD CLARKSON—TABLET CONSULTANT

At Last—A practical, authoritative textbook on Tablet Coating!

This is the answer to a world-wide request for a down-to-earth book on this highly specialized technique.

The author, Ronald Clarkson, an outstanding tablet consultant, is well known in this country and abroad for his contribution to technical literature on Tablet Manufacturing. Co-author of the text book *Manufacture of Compressed Tablets*, he has also presented papers on various phases of tablet manufacturing before the APMA production meetings.

Since entering the consulting field he has been a contributor to *Drug and Cosmetic Industry*.

In his capacity as a consultant the author has been supplying coating instructions to his clients in various parts of the world at a substantial fee. This confidential copyrighted treatise was entitled *The Fundamental Procedure for Coating Tablets* and forms the basis for this text.

The original treatise has been greatly expanded and here it is at a fraction of the original price!

A Valuable Aid to Everyone interested in coating tablets

- Production Managers
- Sales Managers
- Coaters (experienced and inexperienced)
- Development and Research Men
- Beginners
- Students

A Technical Book filled with Formulas for

- Subcoating Syrups
- Dusting Powders
- Colored Syrups
- Polishing Solutions
- Protective Coatings
- Coatings for Tropical Climates
- Enteric Coatings

In addition to the valuable formulas, complete directions for their preparation are given—even to such minute details as the temperatures at which they should be used.

Detailed instructions on how to reclaim spoiled tablets are outlined.

An entire chapter is devoted to installing a coating department—recommendations being given regarding the proper size and type of equipment, operating capacities, dust control and hot air systems—also how to lay out a complete coating department, including blueprint floor plan.

All extraneous matter has been omitted. This book deals 100% with the details of actual coating—how to do it and produce satisfactory results.

Here is the first book of its kind ever published. Complete, simple, and easy to follow instructions on what to do and what *not* to do. It will prove invaluable to you as an instructive text, and as a ready reference.

74 Pages — **Illustrated** — **15 Chapters**

Price $4 Postpaid

Book Department

DRUG & COSMETIC INDUSTRY

101 WEST 31ST ST. — **NEW YORK 1, NEW YORK**

Ready For Immediate Shipment

Perk up your perfumes . . .

with **ASTROTONE BR**
(TRADEMARK)

Perfumes take on new life when you use this fine blender . . . this versatile, modern fixative . . . "Astrotone" BR! Here's a true synthetic that makes perfumes sparkle . . . softens and sweetens a formula . . . gives a note of luxury to lower-priced bouquets. "Astrotone" belongs to the musk tonquin family (not a nitro musk). And it's wholly soluble in and compatible with all perfume materials.

Need any help? Send for the helpful booklet telling you all about "Astrotone" BR . . . or consult us if you have a perfume problem. Write E. I. du Pont de Nemours & Co. (Inc.), Organic Chemicals Department, Aromatics Section, Wilmington 98, Delaware. Branch Offices: Atlanta, Boston, Charlotte, Chicago, New York, Philadelphia, Providence, San Francisco.

DU PONT AROMATICS

DU PONT
REG. U. S. PAT. OFF.

BETTER THINGS FOR BETTER LIVING . . . THROUGH CHEMISTRY

Fresh as a
May Breeze....

Synfleur MAYSCENT

a line especially adapted for
that light floral composition.

MAYSCENT #40 at forty dollars per pound for perfume
MAYSCENT #3 at eighteen dollars per pound for cologne

Also available for special adaptations
in other price lines.
Samples gladly sent on request

Write today for a sample or trial pound

Synfleur Scientific Laboratories, Inc. *Monticello, N.Y.*
REG. U.S. PAT. OFF.

FOUNDED 1899 BY ALOIS VON ISAKOVICS

ATLANTA • DETROIT • NEW YORK • HAVANA • RIO DE JANEIRO • MEXICO, D. F.
CHICAGO • MELBOURNE • BURMA • HONG KONG • BOGOTA • SAN JOSE
CIUDAD TRUJILLO • GUAYAQUIL • GUATEMALA CITY • CALCUTTA • WELLINGTON
MANAGUA • PANAMA • ASUNCION • MANILA • SAN SALVADOR • MONTEVIDEO

Consumers may not know, but it's cellulose gum that keeps many of their favorite cosmetics and dentifrices in proper condition. Cellulose gum is unsurpassed among water-soluble colloids for its combination of suspending, thickening, stabilizing, and film-forming properties.

Wherever a hydrophilic colloid is required in cosmetics or pharmaceuticals, including pharmaceuticals designed for human consumption, cellulose gum—also known as purified "Hercules" CMC—is your assurance of uniform quality. It meets in every way the standards of such authorities as The Toilet Goods Association, Inc. Send for technical data and testing sample.

HERCULES POWDER COMPANY 977 Market St., Wilmington, Delaware

MORE AND MORE CONSUMERS USE PRODUCTS MADE WITH **CELLULOSE GUM**

(*HERCULES*® CMC)

Rx...*confidence*

You hand the pharmacist a slip of paper. In return, he gives you a package of . . . *confidence!* You know nothing about it, *but you expect your medicine to work.*

Why?

Because you believe in the *doctor* who wrote the prescription. You believe in the *pharmacist* who filled it. And you know the pharmacist believes in his *suppliers*—is confident the chemicals and pharmaceuticals on his shelves are pure and dependable.

The prescription is only one example of how our system works. The *customer* has confidence in his *dealer,* who has confidence in the *producer,* who has confidence in his *suppliers.* When this chain is broken, business stops.

Hundreds of pharmaceutical manufacturers recognize that Mallinckrodt has been building confidence for 84 years. These important producers know the dependability of Mallinckrodt's products and service—and that is why Mallinckrodt has served many of them for three generations.

To Mallinckrodt, every order is an additional reminder of its responsibility in this chain of confidence.

MALLINCKRODT CHEMICAL WORKS • St. Louis • New York • Montreal

Mallinckrodt®

PHENOBARBITAL U.S.P. • BISMUTH SALTS • IODIDES • MAGNESIUM TRISILICATE U.S.P. • CALCIUM GLUCONATE U.S.P. • VITAMINS • MERCURIALS • THEOPHYLLINE U.S.P.

• MANUFACTURERS OF FINE CHEMICALS FOR THE PHARMACEUTICAL INDUSTRY • SINCE 1867 •

"Like hell we'll go ethical," I told the Boss, 'What do those dumb doctors know about deals and special promotions?"

KEEPING POSTED

N.A.R.D. Enters Fair Trade Case

THE National Association of Retail Druggists and the Bureau of Education on Fair Trade have received permission to appear as *amicus curiae* in the case now before the U. S. Supreme Court in which the validity of the non-signor provision of the State Fair Trade Acts in interstate commerce is being challenged. Since the U. S. Department of Justice is also appearing in the same capacity on the other side of the case, the matter will now be handled in a manner not possible with only private individuals or companies involved. The case involves a violation of the minimum prices of Calvert Distillers Corporation by a retailer, Schwegmann Brothers, of New Orleans. The District Court upheld the validity of the non-signor clause in interstate commerce and ruled in favor of Calvert. The Circuit Court of Appeals ruled likewise, but by a divided vote.

Now There is Compound B

COMPOUND B, or corticosterone, produced as the result of research work of the Upjohn Company, displayed remarkable effects in treatment of four patients suffering from Addison's disease, according to Dr. Jerome W. Conn of the University of Michigan. In the Spring of 1950, Upjohn supplied Dr. Conn with fifteen grams of the drug, an amount equal to about four teaspoonfuls, and early this year they supplied Dr. Conn with an additional small quantity. Thereupon, Dr. Conn gave the drug to two normal healthy persons and studied the effects. He found that the effect was similar to that of ACTH and cortisone in that the body retained salt and water and lost potassium, which is just the opposite of what happens in Addison's disease in which the adrenal glands fail to supply the body with hormones necessary to balance salt, potassium, water, sugar, protein, and other elements.

Dr. Conn thinks that compound B may open up an entirely new field of research, because other research teams have shown that it is a pure or natural output of the adrenal gland, whereas cortisone is now thought to be a breakdown product of another pure substance produced by the adrenal glands, namely compound F. Together, compounds B and F in equal amounts constitute about 90 per cent of the adrenal cortex hormonal production, says Dr. Conn. The cortex is the outer covering of the gland; the inner portion is the medulla, by which the adrenalin is secreted.

The Cortisone Shortage

MERCK & CO. squarely faced the cortisone shortage situation in an advertisement published in newspapers throughout the country. The advertisement was in the form of a statement by Merck & Co. clearly setting forth the facts concerning the present and future supplies of Cortone—the Merck brand of cortisone—and the facts concerning the distribution of available supplies.

As to supplies, Merck states that it is producing sufficient Cortone to treat tens of thousands of patients, while demand involves hundreds of thousands of people. "This demand cannot be satisfied by present methods of manufacture," the statement reads, explaining: "The present starting material in the manufacturing process is cattle bile, an organic substance limited in supply. *Before cortisone can be made in sufficient quantities, a new, more plentiful starting material will have to be found, or a complete synthesis discovered by the chemists and research workers . . .* Output from a new plant now being built near Danville, Pa., at a cost of approximately $7,000,000, together with expanded production and further improvement in yields from the process at the Rahway plant, is expected to triple or quadruple present company output by the middle of 1952. Intensive research is meanwhile being continued to improve current processes, to find new and more abundant starting materials for cortisone manufacture, and to discover a key to complete chemical synthesis."

Merck explains that current supplies are being allocated to wholesalers throughout the country on the basis of the incidence of diseases in the treatment of which Cortone is effective. Out of any given quantity of material available for shipment, there is allocated to wholesalers in each district a percentage proportionate to the sufferers within that district. With regard to military demands and exports, Merck & Co. states:

"The rumors that all or a great part of the supplies of Cortone have been requisitioned by the Government are not true. From the standpoint of military use, it is being investigated for use in plastic and orthopedic surgery, eye injuries, and the treatment of shock and burns.

"Under the export control regulations of the Federal Government, a small percentage of output is exported by Merck to selected foreign countries, which have cooperated in the development of clinical evidence. Bile, the present starting material, is obtained from some of these countries. Merck is sending none of its output to Russia or to any of its satellite countries."

Merck explains that the patents of Merck and three other companies for cortisone production have been pooled so that any of the four companies can use all of the patents. Included in the pool is the Research Corporation, a non-profit organization, which has been granted the right to issue patent licenses covering these patents to other firms.

Stable Crystalline Vitamin A

STABILIZED synthetic crystalline vitamin A acetate is announced by Chas. Pfizer & Co. While crystalline vitamin A has been known for some ten years, it has merely been a laboratory curiosity for the reason that it was subject to rapid deterioration from contact with air and humidity. However, Pfizer has a patented process for coating the vitamin A crystals with gelatin, rendering them safe from deterioration. The result is a completely dry, free-flowing product with a potency of 500,000 U. S. P. units per gram. The potency of pure, uncoated crystalline vitamin A is 2,900,000 units per gram, but in the Pfizer product, gelatin for the purpose of coating the crystals is present to the extent of about 83 per cent of the total weight of the product, and therefore, the potency is reduced to 500,000 units per gram. The stability of the product is such that the vitamin shows no substantial deterioration (about 3 per cent) when exposed to the air at elevated temperatures for 1,200 hours. This is the approximate equivalent of storage for three years under normal conditions. As to the importance of this new form of synthetic vitamin A, Pfizer officials state:

"Up to now vitamin A has been generally available only in soft gelatin capsules. The new dry form of synthetic crystals makes possible the incorporation of vitamin A in multi-vitamin tablets. Surveys show that over 65 per cent of medical patients prefer the tablet over the capsules. In addition, the fortification of dry foods with vitamin A, hitherto impractical, is now simplified. The new product paves the way for tackling the vitamin A deficiency commonly felt by low income groups. It also gives the Armed Forces more leeway in the fortification of certain army rations."

Pfizer now produces synthetic vitamin A at a new two-million-dollar plant at Groton, Conn. At full capacity, this plant will be able to produce 50 per cent of the total U. S. civilian and military needs for vitamin A, according to Pfizer President John E. McKeen.

A.P.M.A. Research Award to Dr. Rusk

DR. HOWARD A. Rusk, director of the Institute of Rehabilitation and Physical Medicine of the New York University-Bellevue Medical Center was the recipient of the 1951 Research Award of the American Pharmaceutical Manufacturers Association. Presentation was made April 2, at the A.P.M.A. annual meeting at Boca Raton, Fla. Dr. Rusk is the first clinician to receive the award, according to Dr. Martin Lasershon, chairman of the Research Board and vice-president of Winthrop-Stearns, who states:

"Dr. Rusk's research has been directly responsible for the rehabilitation to active useful life of many thousands of servicemen who sustained catastrophic injury and crippling, as well as civilians handicapped from accidents and from such paralyzing diseases as poliomyelitis, multiple sclerosis, apoplexy and cerebral palsy.

"Primarily responsible for the erection of the new Institute of Rehabilitation, Dr. Rusk is engaged with his group not only in the care of disabled patients, but in fundamental research in physical medicine which will undoubtedly lead to great practical benefits for the nation's handicapped. Dr. Rusk became vitally interested in the problem during the last war when he was in charge of the Army Air Forces' rehabilitation program. He then first developed what is referred to now as the 'third phase of medical care,' concerned with the rehabilitation of the patient from the time he leaves his bed until he starts on a job."

Pitfalls in Clinical Investigations

HARKING back to December, 1950 when we reported on the statements made by Dr. Louis N. Katz, of Chicago, regarding ceremonious administration of therapeutic agents under clinical investigation, we now note that Erwin Di Cyan, Ph. D., of New York, recently pointed out that "many incidental factors may be responsible for the relief or amelioration experienced" by a drug under investigation. Said Dr. Di Cyan:

"The determination if the purported or reported effects are a matter of *fact* or *fancy*, needs verification. This requirement, among other factors, makes clinical investigation the highly complicated practice that it is. Assuming that the hoped-for results are apparently achieved, there is a need to determine if relief, amelioration, or cure is due to:

a. the therapeutic effect of the drug
b. the psychogenic effect that the patient derives from *any* drug
c. the natural remission which accompanies the disease cycle
d. the effect of an associated agent
e. the interpretation
f. the sincere but wishful thinking on the part of the investigator

Acetyl-Para-Aminophenol Withdrawn

THE withdrawal from the market of products containing acetyl-para-aminophenol does not definitely mean that this product will not appear again. However, further studies will be made to determine definitely whether or not this chemical can be safely used. This chemical was regarded as a new product, although it now appears that it was known some seventy years ago, more or less. Statements regarding its recent introduction were to the effect that acetophenetidin (phenacetin) and also acetanilid are rapidly metabolized in the body to acetyl-para-aminophenol, and that this substance is responsible for the pain-relieving and antipyretic effects of those drugs. Also, it was stated that certain side-affects of acetophenetidin and acetanilid are not encountered when acetyl-para-aminophenol is used. On the basis of this information, Squibb had on the market for about eight months a product called Trigesin, with and without codeine. Trigesin contained aspirin and caffeine in combination with actyl-para-aminophenol. In other words the tablets were similar to the well-known APC tablets, but the phenacetin was replaced by acetyl-para-aminophenol. They were detailed to doctors on the claim that they were more free from possible side-effects than APC tablets, and therefore safer to use. Just shortly before the discovery of deleterious effects from the use of the Squibb preparation became known, the Norwich Pharmacal Company introduced a headache tablet called Nebs, which contained acetyl-para-aminophenol. Some cases of agranulocytosis were called to the attention of Squibb, one of which was claimed to be directly attributable to the use of Trigesic. Squibb thought that these revelations were of sufficient importance to cause them to notify the Food and Drug Administration and also to recall their product from the market. Norwich, likewise, completely withdrew its product from the market. Whether a tie-up between this chemical and agranulocytosis will be established or not depends upon the results of intensive investigations. The results of these investigations will determine the fate of this drug.

American Can's 50th Birthday

THE American Can Company celebrated its fiftieth birthday on March 19 when its 34,000 employees sat down to 71 simultaneous birthday dinners in the United States, Canada, and Hawaii, linked by one of the most extensive telephone-loud-speaker hook-ups in industrial history. The plant and office dinners were held in 59 cities and towns. Division office dinners in New York, Chicago, San Francisco, and Hamilton, Ontario, Canada, were hooked up by two-way telephone-loudspeaker circuits, and one-way circuits carried proceedings at these locations to the dinners in other cities and towns for the employees of the company's plants, machine shops, research laboratories, and other units.

The New York dinner, focal point of the anniversary ceremonies, was attended by the New York executives and directors of the company and employees of the general headquarters and Atlantic Division offices in that city. The dinner was held in the ballroom of the Waldorf-Astoria Hotel.

Spill-Proof Nail Polish

WE WERE quite taken with the idea of a spill-proof bottle of nail polish as announced by Northam Warren last month. Long have we thought about nail polish bottles and the catatrophe which could occur if they were tipped over. With this in mind we welcomed the trend a few years back to the wide base bottle. However, no longer will we worry about the shape of the bottle since this new package can be turned over on its side and not a drop comes out. And the self-sealing apparatus in the neck of this new container also wipes the excess polish from the brush as the brush is removed from the bottle. This eliminates completely the danger of the brush containing a large blob of polish which might drop off the brush when the brush is being transferred from the bottle to the nail which is to be coated. We are sure that this new type of nail polish container will make life much happier for our women-folk, and also for our men-folk who quite often suffered agony worrying about the possible damage which was likely to happen when the ladies handled nail polish. Science marches on!

M.C.A. Food Chemicals Committee

A STANDING committee on chemicals in foods has been appointed by the Manufacturing Chemists Association. This committee replaces the temporary task committee organized last year to prepare the statement of the Association presented before the Delaney Congressional Committee investigating the use of chemicals in foods. The new committee will consider general industry and legislative problems associated with the safe use of chemicals in foods and will cooperate with Government agencies and other organized groups interested in the subject. The committee will welcome communications and suggestions. Members of the committee are:

Chairman, H. C. Spencer, The Dow Chemical Company; T. R. Aalto, Heyden Chemical Corp.; Fred Bartenstein, Merck & Co.; H. J. Fougler, E. I. du Pont de Nemours & Co.; J. M. Gillet, Victor Chemical Works; S. J. Hill, E. I. du Pont de Nemours & Co.; Wilbur Miller, American Cyanamid Co.; R. D. Minteer, Monsanto Chemical Co.; N. E. Rigler, Heyden Chemical Corp.; J. Philip Smith, Chs. Pfizer & Co.; Henry Smyth Jr., Mellon Institute of Industrial Research; G. J. Williams, The Dow Chemical Company.

More Nitrofurans

OVER fifty new and original nitrofuran compounds have been evaluated for their antibacterial and chemotherapeutic effectiveness during the past year in an intensive screening program by the research division of Norwich Pharmacal Company. With several new compounds made available to the medical profession in 1950 including one, Furaspor, a specific for lung infections, the Norwich medical department has conducted during 1950 approximately forty separate screening projects on various new Norwich and Eaton Laboratories drugs in medical clinics throughout the United States. Additional members of the furacin family marketed by Eaton Laboratories were furacin nasal solution and furacin opthalmic ointment. Other projects include the study of nitrofurans and their effect on various metabolic processes which are being continued this year with actual evaluation on patients suffering from diseases such as arthritis, leukemia, and various types of malignancies.

More Penicillin Coming

PLANS are in the works for doubling the output of penicillin within the next few years, with production probably reaching an annual output of 445 trillion Oxford units. Rough estimates of the 1950 output are given at 222.3 trillion units. This startling expansion being planned by this industry and the National Production Authority, is said to be out of the blueprint stage, although the actual size of the expansion has not definitely been worked out. Some of the new construction will receive Government approval for amortization at a rapid rate, it is said.

During the past year penicillin demand has skyrocketed because of its increasing widespread use by doctors, its demand for export, and its increasing use in new forms such as salves and toothpowders. Only a fraction of current demand—about 7 to 10 per cent—comes from the military, and this particular demand would increase very sharply in the event of all-out war. Also, it is anticipated that civilian demand for the drug will continue to climb for some time to come. After the mobilization period is completed, the extra penicillin capacity will be readily absorbed by use of penicillin in a wide range of products, according to forecasters. Also a considerable demand for the drug is expected to develop as an ingredient in animal feeds, since penicillin incorporated into feeds has been found to increase the size and heartiness of animals.

Really Guaranteeing a Sale

THE Henry Thayer Company of Cambridge, Mass., says that they really respect the claim that their goods are sold on a guaranteed sale basis. Recently Willard H. Roberts Prescription Pharmacy, Utica, N. Y., returned six packages of Thayer's Cascara-Elms to the company with the following note:

"Old and/or unsalable merchandise of your manufacture. Kindly replace with your Thayer's Slippery Elm Throat Lozenges We can sell these, Thank you."

Thayer President James J. Storrow Jr. says: "Our company records show that Cascara Elms were discontinued 47 years ago. In fact, there is only one employee, William Kidston, who has been with the company for 50 years, who remembers them. But a guaranteed sale is a guaranteed sale." Mr. Storrow authorized immediate shipment of Slippery Elm Throat Lozenges as replacement.

The F.D.A. and Retailers

THAT the Food and Drug Administration is making good use of its possession of the power to control the sale of drugs by retailers, is shown by its monthly reports of convictions. This power was upheld in the famous Sullivan case which hinged solely on the fact that the sulfa tablets sold by Sullivan over the counter did not contain adequate directions for use. The case did not turn on the fact that the FDA considered these drugs dangerous when sold without a prescription. However, the convictions reported for February of this year, which are seven in number, all contain the statement that the convictions were obtained because the products involved were sold "without physicians' prescriptions." The individual cases involved the following products: 1. Barbiturates, amphetamines, sulfonamides; 2. Barbiturates, amphetamines, sulfonamides, thyroid; 3. Barbiturates, amphetamines, sulfonamides, thyroid; 4. Amphetamines, thyroid, stilbestrol; 5. Barbiturates, Neo-Hombreol; 6. Benzedrine, methyltestosterone; 7. Barbiturates, thyroid. Four of the druggists convicted in February were located in Mena, Arkansas, and the others were located in Owensboro, Kentucky; Barberton, Ohio; and San Angelo, Texas.

D.S.C. Expansion

THE Druggists Supply Corporation, marketing and buying organization for 141 independent service drug wholesalers with an annual volume of about $350,000,000, is planning broad expansion of its activities, according to Board Chairman W. Rutherford James, of Towns and James, Brooklyn wholesalers. The plans call for extension of operations into all main-volume lines, beginning with proprietary medicines, and including pharmaceuticals and cosmetics. Previously, the main efforts of the organization were concerned with sundries and various drug store sidelines. As part of the new development, J. Wayne Luther has resigned his position as general sales manager of the Mennen Company to become president of the Druggists Supply Corporation. The Druggists Supply Corporation was established in 1913. However, it became increasingly active following the original McKesson & Robbins merger with fifteen well-known wholesale druggists in August 1928. At this time, the independent wholesale druggists not absorbed by McKesson & Robbins, turned to the D.S.C. as a means of meeting the purchasing and marketing advantages possessed by McKesson & Robbins as a result of their large volume. The present wholesale members of the D.S.C. are said to service about 47,000 retail accounts.

The Drug Shortages

RECENTLY we noticed in the New York daily press a front-page item having to do with the shortage of drug products. The item called attention particularly to a theft of penicillin, aureomycin and some other items which had occurred at Lederle Laboratories. Evidently, the basis of the story was nothing more than a robbery, and the items involved in the robbery, in this particularl case, were drugs, which is rather unusual. The rather large number of new specific pharmaceuticals which has been introduced in recent years has focused the attention of the public upon the relatively high prices and sometimes quite short supply of these items. Someone should undertake to educate newspaper men to the fact that drugs—and in the main only the newer drugs—are not the only things which are short particularly in the chemical field. Someone should inform them that a serious shortage exists in such basic and widely produced products as sulfuric acid, benzene, glycerine, alcohol and other solvents, not to name another host of chemicals, supplies of which are insufficient to supply our greatly accelerated civilian production together with our enormous defense production and the greatly increased export demand to all parts of the world. And when we leave chemicals we can find shortages in too many other industries to make the shortages existing in drugs and chemicals unique. And black market operations are certain to exist in anything that is sufficiently short, be it drugs or washing machines.

Maybe Leukemia Control

THE University of Wisconsin has announced discovery of a new vitamin "which holds promise of aid in arresting the dreaded blood disease, leukemia." Called the citrovorum factor, the new vitamin is said to promise to be better "and then some" than its forerunner, folic acid. It is predicted that the product may not only aid in arresting leukemia but also, like folic acid, help meet growth demands, but in a faster way. The activity of the citrovorum factor in leukemia comes about through its ability to counteract the action of aminopterin. Aminopterin is capable of hindering wild blood cell growth, but it is apt to destroy healthy as well as diseased blood cells if left unchecked, and this is where the citrovorum factor comes in. According to Dr. Esmond E. Snell:

"By giving just the right amount of the citrovorum factor along with aminopterin, the cell-destroying powers of aminopterin may be checked at the most effective point. Possibilities of using this combination to fight leukemia now are being worked on by other research."

Antimalarial Output Increasing

PRODUCTION of Aralen, the antimalarial which has replaced Atabrine for use by the Armed Forces, has tripled since the Korean hostilities started and will be stepped up another 140 per cent by July, according to Dr. Theodore G. Klumpp, president of Winthrop-Stearns. Current output is at the rate of 100 million tablets a year, but will be increased to 240 million tablets annually. Aralen, synthesized by scientists of the Sterling-Winthrop Research Institute several years ago, relieves acute attacks of malaria much faster than previously known drugs, and cures falciprum malaria, a type of disease that is non-relapsing but often fatal.

G. I.'s using Atabrine had to take a tablet of 0.1 gram every day as a suppressive or prophylactic dose, and a curative treatment required 28 Atabrine tablets over a 7-day period. Comparative doses with Aralen are one tablet of 0.5 gram per week as a suppressive or prophylactic dose, and five tablets over a 2½ day period for cure. Aralen is a white tablet and does not cause temporary discoloration of the skin as did the yellow colored Atabrine.

In 1944, total output of Atabrine reached a peak of 3.5 billion tablets. Of this amount, Winthrop-Stearns supplied 1.4 billion tablets, or 140 million grams. This compares with the annual rate for Aralen of 120 million grams which will be attained next July. Comparative consumption for a cure is 2.5 grams of Aralen against 2.8 grams of Atabrine; and for prophylaxsis, 0.7 grams of Atabrine per week, against 0.5 grams of Aralen per week.

Commercial Solvents Forecast

OFFICIALS of Commercial Solvents are forecasting a total sales volume for 1951 totaling $65 million, compared with $45 million for 1950, and $33 million for 1949. Speaking before the New York Society of Security Analysts recently, J. Albert Woods, president of the company, broke this down into figures for the various divisions of the company: Agricultural chemicals, $13,500,000, against $9,320,000 in 1950, and $8,860,000 in 1949; industrial chemicals, $21,500,000, against $15,300,000 and $9,000,000; pharmaceuticals, $10,500,000, against $6,500,000, and $6,000,000; specialties, $10,500,000, against $9,300,000, and $8,700,000; and potable spirits, $9,000,000, against $4,500,000, and $1,500,000.

Antibiotics and the Flu

THE recent flu epidemic proved once again the great value of the antibiotics in present day therapy. Infectious diseases of this sort are quickly brought under control with these drugs and quite quickly put the patient in the condition that hospitalization and constant care are totally unnecessary. We cannot say which of the currently prescribed antibiotics was best for the strain of influenza that was rampant. The particular one prescribed depended on the doctor treating the case, and the ones which the doctors prescribed seemed to depend to quite some extent upon which antibiotic was being most widely used in the area of the country in which they are located.

Senator Gillette Goes After Soaps and Cleansers

SENATOR Guy Gillette of Iowa is quite busy introducing bills designed to prevent, as far as possible, the use of synthetics as opposed to natural fats. After all, Senator Gillette is trying to protect his farm constituents to as great an extent as possible. Bill S. 343 would amend section 602 of the Food, Drug, and Cosmetic Act, which section deals with cosmetic misbranding, to provide that a soap or any other detergent is misbranded, unless the labels bear its common or usual name, if any; and if fabricated from two or more ingredients, the common or usual name of each ingredient (except coloring may be designated as such) and the percentage of each soap or other detergent ingredient. Bill S. 345 would amend the definition of cosmetic in the Food, Drug, and Cosmetic Act to delete the soap exemption. It would also amend section 602 (dealing with cosmetic misbranding) as provided in S. 343 above, with respect to soap or any other detergent. Either of these bills would bring soaps under control of the Food and Drug Administration. It will be recalled that the definition of cosmetics in the Food, Drug, and Cosmetic Act defines cosmetics in such a way that soaps would be included, but then says "except that such term shall not include soap."

The Senator has another bill, S. 344, which would bring under the Federal Security Administrator control of household cleansers. This act is known as the Federal Household Cleanser Act and is modeled on the Food, Drug, and Cosmetic Act. It defines a household cleanser as articles, in packages or containers suitable for household use, intended for use in washing, cleansing, deodorizing, renovating, bleaching or polishing; but it does not include instruments, apparatus or contrivances or cosmetics as defined in the Food, Drug, and Cosmetic Act. It prohibits interstate commerce in a contraband household cleanser. A cleanser is declared contraband in the following (among other) circumstances: 1. if it bears or contains any poisonous or deleterious substance which may render it injurious to users under the conditions of use prescribed in its labeling or that are customary or usual; 2. if its container is wholly or partially composed of any poisonous or deleterious substance which may be injurious to users under the same aforesaid conditions; 3. if its labeling is false or misleading in any particular; 4. if in package form, unless it bears labeling containing the name and place of business of the manufacturer or other seller and an accurate statement of the net weight or measure; 5. if its container is so made, formed or filled as to be misleading; 6. unless the labeling bears its common or usual name, if any, and if fabricated from two or more ingredients, the common or usual name of each ingredient (except that coloring may be designated as such) and the percentage of each ingredient which is a poisonous or deleterious substance; 7. if it purports to be a soap or any other detergent (exclusive of water), unless its labeling bears the percentage of total ingredients which are not soap or other detergents; or 8. unless its labeling bears adequate warnings against misuses which are likely to occur and which may be injurious to users.

Drugs and Groceries

THE affinity which is waxing increasingly strong between the food interests and the drug interests was pointed up last month when Rexall Drug, Inc., elected as a director J. Frank Grimes, president of the Independent Grocers Alliance of America. Mr. Grimes is also president of Marketing Specialists, Inc., the Market Specialty Company, Food Products Company of America, Neighbor Products Company, and the Chicago Offset Printing Company. Frank Head, of the Whelan Drug Company, recently told the members of the Federal Wholesale Druggists Association that the sharply increasing activity of grocery outlets in the distribution of drugs and cosmetics is moving eastward at a rapid rate, and that they would feel it before long.

He said that this inroad upon the retail druggist, and those being made by the house-to-house cosmetics sellers are threats to the future of the business. To combat these inroads requires increased activity in pharmaceuticals, and a real cosmetic department.

Chlorophyll Air Deodorants

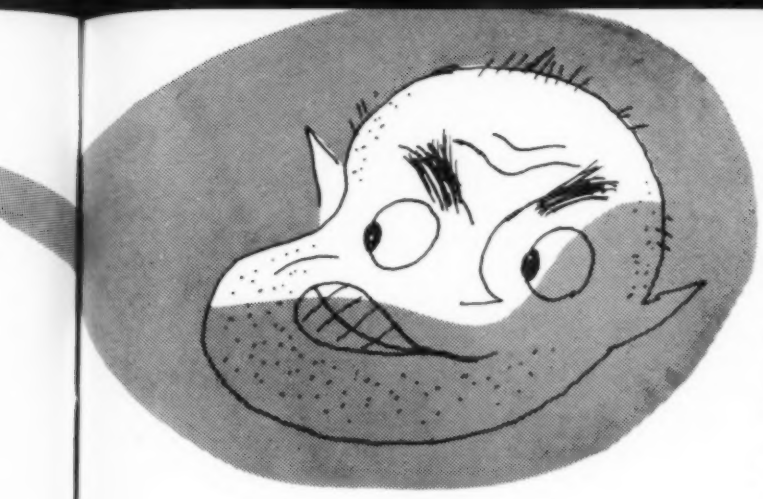
THE makers of the deodorants Air-Wick and Airkem have stipulated with the Federal Trade Commission that they will revise their advertising claims. Seaman Brothers agrees to stop claiming that Air-Wick eliminates all unpleasant odors or that it clears or freshens the air otherwise than according to its seeming effect. The Airkem Corporation agrees to discontinue claims that Airkem ends deodorant problems; that it does not mask odors; that it restores some of the characteristics of outdoor air; or that it freshens the air otherwise than according to its seeming effect. The stipulations also provide for discontinuance of representations that the products contain pure chlorophyll, as distinguished from commercial chlorohyll; that the action of chlorophyll in the product is similar to the action of chlorophyll in nature; or that the content of commercial chlorophyll as an active ingredient in the products provides a chief effect in their action.

THE ATTACK ON A

THE doctors of this country do not give up easily. Ask anyone who is concerned with preventing the enactment of Federal compulsory health insurance legislation and they will tell you quite frankly that one of the great difficulties in changing conditions in such a way as to eliminate the need for such legislation is that the doctors will not give. In other words, the medical profession would like to see conditions in medical care of such a nature that a large part of the public no longer feels the need of any Government action, but they would like to see this accomplished without it affecting their present method of doing business.

In other respects also, the medical profession of this country continues to act as of old. We well recall the fight which the medical profession made on what it called "indiscriminate use" of vitamin preparations. During the period of time that vitamin preparations were promoted by many manufacturers through advertising directly to the public appearing in newspapers, magazines, car cards, etc., and also broadcast constantly over the radio, the medical kept blasting away at vitamins. All sorts of outstanding groups of doctors rendered reports on the subject which were widely distributed through the daily press. Even the doctors writing syndicated columns for the press kept blasting away at the idea of anyone daring to take vitamin preparations without constantly consulting a doctor as to the true state of his health. In addition, Dr. Morris Fishbein, then editor of the Journal of the American Medical Association, and generally referred to as "spokesman" for the Association, constantly referred to vitamin preparations as taking the place with many people of the "tonics of the olden days."

During the time when this barrage against the use of vitamins by the layman was going on, the doctors themselves were continually prescribing vitamins due to the fact that they could not fail to have some knowledge of the true place of these products in proper nutrition as the result of the outstanding work done. Perhaps they were only aware of this work because of the talks and literature given them by detail men of pharmaceutical manufacturers, but nevertheless they were aware of it. Their campaign was so successful that seven of the leading manufacturers promoting their vitamin preparations directly to the public



N ANTIHISTAMINICS

accounted only for 12½ per cent of the total business being done in these products at that time. Finally, practically all of them gave up the ghost, and today only one manufacturer continues to promote his vitamin preparation in this way. When this happened, the blasts against self-medication with vitamins ceased, and the doctors, having brought the use of vitamins quite completely under their control, went on their merry way as the prescribers of these products. And how inadequately they are prescribing them is well illustrated in the article "Status of Nutritional Therapy," by L. Stambovsky, which appeared in our March issue.

But now the medical profession is quite apparently determined, if possible, to stamp out self-medication with the antihistaminics. Remember that "miracle" drugs of recent years have wrought havoc in certain sections of the medical profession. Due to the discovery of penicillin and other antibiotics, the specialist in venereal diseases has no place in medicine today. These diseases can be promptly *cured* by the general practitioner in a matter of a few days, compared with constant treatment by a specialist over a period of months or years before the discovery of these new curative agents. Secondly, the ear, nose, and throat specialist is also in a bad way as the result of the discovery of these drugs. No longer is there any need for a mastoid operation, and, in fact, the medical profession is unable to supply sufficient of these operations to teach students how they should be done. Sinusitis and other conditions can also be readily treated by the general practitioner with these drugs. So this branch of medical specialty has been badly hit and is almost through, and although these specialists are still yanking out tonsils at a rapid rate, they might soon lose the bulk of this business as the result of the ability of the antibiotics to cure tonsilitis and similar diseases promptly.

A third specialist who is suffering badly, and who appears to be faced with extinction because his work can probably be handled easily enough by the general practitioner with recently discovered drugs, is the allergist. The antihistaminics, while blessings to people who suffer from many allergic conditions such as hay fever, asthma, and the like, are far from blessings to the specialists in the field of allergy. This specialty appears to be on the way out as the result of the use of these drugs but the doctors in it are putting up a battle for survival. And because of the fact that these preparations are, in some forms, available for self-medication by purchase over-the-counter the medical profession as a whole is faced with the loss of this business. In the cases of the venereal disease specialist, and the ear, nose, and throat specialist, the drugs used—the antibiotics—are only available on prescription, and therefore, although the specialists suffer, the medical profession as a whole still must be called upon for treatment of these diseases. However, in allergic conditions relieved by the antihistaminics, in the great majority of instances, the layman can treat himself. Therefore, this calls for a united front within the medical profession to try and stop, if possible, the use of these drugs by the average person without consulting a doctor.

This is the basic reason for all the attacks appearing in the lay press on the use of antihistaminics for the treatment of colds and similar conditions. The "common cold"—nobody knows what this term means—is always a controversial subject. Various individuals seem to get varying types of colds and most of them have their own methods of treatment to which they respond in some fashion. The list of cold remedies is long and varied in composition, and individuals are apt to engage in bitter arguments regarding their merits. So far as we are concerned, antihistaminics as cold remedies are just another instance of a type of product which many people will take with excellent results in the treatment of an ordinary cold, while other people will not derive any noticeable value from them.

But the medical profession cannot allow this view of the antihistaminics to prevail. Since, unfortunately for the medical profession, these products are permitted

(*Continued on page 504*)

NEW ERA S

IT IS BECOMING increasingly clear today that a new order of salesman is in the making. The salesman of industrial materials, who has been a good fellow, a ready mixer, an expert at keeping good old Joe, the buyer, happy, is every day being succeeded by the technically trained man who can objectively analyze his prospects' problems and make his materials help solve those problems.

But it is in retail selling, particularly of branded packaged goods that the new order is most apparent and where new responsibilities and new opportunities for the salesman are most clearly evident.

Take the relation of the branded product Salesman to consumer advertising as one example.

Consumer advertising, in its modern conception as a sales instrument to build or force distribution, to control retail favor, to force, stimulate or activate consumer action, came into full flower in the early twenties, following World War I. There were stimulating and fantastic successes—many of them—in those days which could, without possible reservations, be credited to advertising. It was no wonder that so many leaders in advertising and business went overboard in their enthusiastic belief that advertising—enough of it, of course—was the one magic that brought success and dominance.

This belief in the complete magic of advertising led to some of the extremes of that time. Many will remember the floor covering advertising, which seemed to appear in every issue of every magazine which could accept four-color printing. This was dominance, plus, in advertising. It brought national and probably universal distribution. Its success brought about the entire elimination of the sales force for this floor covering company and led to a theory, held by some advertising leaders, that dominance and success in advertising made direct retail sales contact unnecessary.

This theory withered in most places when this floor covering company faltered and was taken over by a small competing enterprise which had not been an advertiser. This advertising magic era was succeeded by a period, now reluctantly passing, which largely held that the salesman of a branded packaged product heavily and successfully advertised to a point where "consumer demand" gave the company a powerful hold on the consumer's mind was, and should be so considered in remuneration, an "order taker."

This idea still persists among many companies although it is noticeably breaking down. We don't hear much nowadays, in advertising circles about "consumer demand." We do hear a lot about "brand disloyalty."

A SALESMEN

By Frazer V. Sinclair

The new era salesman is emerging as the man who must make advertising work—make it produce results—make it justify its cost.

We quoted last month in our department "Packaging and Selling" a recent speech by Frederic Schneller, General Merchandising Manager of Lever Brothers Company.

In this speech Mr. Schneller develops clearly the concept of Merchandising as a complete, integrated plan in selling. "In the advertising decade between the phrase 'consumer demand' and 'consumer acceptance' " he said, "lies a whole generation of advertising techniques and procedures, deeply buried, never to be resurrected."

He then continues, "With the effect of brand demand continually lessening, all competitive business faces about the same sales problem—what to do about less and less consumer demand." He then cites the following examples:

"Alexander Smith, Mohawk, and other well-known rug makers spending $250,000 or more a year for advertising, cannot possibly attribute more than 5 per cent of their total volume to consumer demand."

"The three or four *best known* names in the appliance field wouldn't dare claim more than 30 per cent."

"In the soap business it probably reaches as high a level as in any other category. Here it might go as high as 50 per cent."

If we needed proof that the branded product salesman is no longer peacefully gliding on the smooth path of consumer demand, it is everywhere visible in the growing consciousness of large retailers of their own power. Several of these retailers, in recent store tests with dominant competing brands, have shown conclusively that consumer acceptance tends strongly to take the line of least resistance. A brand is "present" in distribution or it doesn't sell. A brand that is present in distribution must be "visible" or its sales drop to a fraction of the potential its consumer acceptance makes possible.

Even the term "consumer acceptance" may fail to reveal the limitation and the true function of consumer advertising today. Recent studies in "impulse" or "unplanned" buying by DuPont for Cellophane, and by Batten, Barton, Durstine & Osborne for one of their clients reveal the great extent of this kind of shopping today and the increasing volume of purchases brought about by in-store suggestions and reminders.

Consumer acceptance implies a conscious comparison of values and recognition of these values. In the impulse purchase this comparison may be lost.

(*Continued on page 532*)

BLOOD PLASMA SUBSTITUTES

PHOTOS COURTESY COMMERCIAL SOLVENTS CORP.

By Milton A. Lesser

DURING and since World War II, pooled human blood plasma has been extensively used in the emergency treatment of hemorrhage, shock, burns and other conditions. Up to a few months ago, supplies of plasma were considered adequate for normal needs. With the sudden change in the course of events, however, it became painfully obvious that "normal" supplies would hardly be sufficient to meet the requirements of the armed forces or of the civilian population should there be an atomic—or other—bombing of cities.

According to one recent report[1] military medical men estimate their needs at about one pint of plasma per year for every man in the armed forces. Civilian defense authorities say that adequate emergency preparedness calls for a stockpile of at least one pint of plasma for every person in a metropolitan area. Thus, in a city like Chicago, it will be necessary to have 5,000,000 pints of plasma available. Obviously the chances of meeting the demand for such massive quantities of plasma are rather remote. As remarked by Self,[2] even 5,000,000 pints of plasma is one-fourth more than is used for civilians in a full peacetime year. It is almost one-third as much as was shipped overseas by the Red Cross during all of World War II.

This means, of course, that a plasma substitute must be made available, not only to meet the increased military needs, but also for stockpiling in case of major disasters at home. Fortunately, recent developments indicate that synthetic plasma replacements can be made available. It must be stressed, however, that even when large quantities of such substitutes are provided, it will not lessen the need for whole blood. As a matter of fact the need for donations to blood banks is greater than ever. There are a number of conditions in which only whole blood can be administered. Moreover, plasma, the liquid portion of the blood, is not only of great importance by itself, but its fractions also provide invaluable materials for preventing and treating many diseases.[3]

The value of plasma was well appreciated at the beginning of World War II and methods for its procurement, preparation and storage were carefully worked out.[4] Thus, because blood plasma was available for the immediate treatment of the injured at Pearl Harbor the percentage of deaths among the scriously wounded and burned was the lowest ever reported from similar casualties.[5]

As noted by Koons,[6] recognition of the value of human blood plasma as a therapeutic agent is one of the outstanding advances of medical science. He points out that in military medicine, plasma has been used chiefly to combat shock due to traumatic injury. In civilian practice, however, plasma has been used with success in other conditions such as hemorrhage, operations, obstetrical complications, burns, hypoproteinemia and infections. Nonetheless, the most spectacular results with plasma are seen in the treatment of traumatic and burn shock.

Significant in this connection is Snell's[7] observation that from 500 to 1,500 cc. of plasma may be required to stabilize the blood volume in traumatic shock. This, says he, is the quantity of plasma obtained from two to six donors. In burned cases, in each 24 hours immediately after the injury, it is customary to administer one liter of plasma for each 10 per cent of the body surface burned. Such figures suggest the enormity of the stock of plasma required under emergency conditions.

Such figures emphasize the chief disadvantage of human plasma and point to the need for readily obtained substitutes. Then, too, the cost of collecting and processing the blood to obtain the plasma is a most important consideration. These and other factors stress the need for an effective, stable, cheap and readily available substitute for human plasma.

Many investigators have given much thought to the standards or requirements of such a substitute. Basically, it is essential that the material should increase and maintain the blood volume and blood pressure for an adequate period of time and that this substance should produce no unfavorable reactions in the normal functions of the body.

Considering the matter in more detail, Koop[8] has said that an acceptable plasma substitute should satisfy certain minimal physical, physiologic, and immunologic criteria. The physical requirements of such a substitute are: stability, ease of storage, low viscosity, high osmotic pressure, and a colloidal particle size large enough to be retained in the circulation. Physiologically, it must be safe for injection in large quantities, must be retained in the circulation long enough to be effective as an oncotic force, and should not interfere with the function of internal organs. Of these last functions, particular attention should be given to blood coagulation, the defense against infection, tissue repair, and the function of the liver and kidneys. Immunologically, a plasma substitute should not be an antigen, or at most it should be a poor one. Any material intended as a plasma substitute should have a minimum of natural sensitivity and no associated food sensitivity.

At present, major interest is being focused on two substances, dextran and polyvinyl pyrrolidone (PVP), with both these materials approaching volume production. There is also a renewal of interest in gelatin and several substances of vegetable origin are being studied. In addition, data on older plasma substitutes, like pectra, acacia, methyl cellulose, polyvinyl alcohol and others are being reviewed and weighed.

Dextran, long known to the sugar industry, was first tested as a plasma substitute by the Swedish investigators, Gronwall and Ingelman,[9] in 1944. Later, the British investigated the material and have begun large scale production of the liquid preparation.

Considerable work is being done on dextran in the United States. Lundy[10] reports that 1,500 patients at the Mayo Clinic have received the Swedish brand of dextran and he and his associates[11] are "greatly gratified" by its beneficial effect. American industry is also looking into the matter. Although others are working on the product,[1,2,12] Commercial Solvents Corporation, New York, is especially prominent in the picture. This organization is energetically pushing a program of research and development that is leading to better, more uniform and larger quantities of dextran at lower cost.

Dextran is a biosynthetic polysaccharide produced by the action of the organism, *Leuconostoc mesenteroides*, on sucrose. The dextran molecules are built up of glucose units linked together in long, more or less branched chains. Since the molecular weight of the product thus

(Continued on page 536)

VANISHING CREAMS AS BASIC COSMETICS

By Harry Hilfer

VANISHING creams were once thought of as creams made from stearic acid, potassium hydroxide, glycerol and water, but other substances were added as time went on, so that individual ideas could be incorporated into the classic vehicle. The author does not know of any formulation which could really be described as a standard vanishing cream formula, but the qualitative description made above is fairly close to it. With the introduction of qualifying materials, however, creams which could normally be described as vanishing creams bear little resemblance to the original.

The changes that were made depended to a great extent on the specialized use for which the cream was directed and the adaptations therefore cover a great many different products, including facial creams, make-up bases, hand creams, brushless shave creams, and many of the topical pharmaceutical products, among others. With the commercial availability of an increasing number of surface active agencies, soap no longer is an essential emulsifying agency and the base may be made at an acid pH if this should prove desirable. The base has proved so desirable because it is rather an easy means of making a solidified vehicle with a relatively high aqueous content and it therefore becomes a convenient means of incorporating water soluble substances into a medium well adapted for surface application. It also lends itself to basic formula changes which make it possible to make the vehicle soft or stiff as desired and pearly or smooth as desired.

The pearly type is best made by using the stearic acid in conjunction with potassium hydroxide. There are a good many theories as to why the sheen is produced. It is probably a function of a complex formation resulting from a physical crystalline arrangement involving the soap and excess stearic acid. This same phenomena may be produced in hand lotions by the use of soap itself without any excess of free fatty acid, where it is aided by the addition of a common ion. Additions of other lipoid materials, however, have a tendency to cause a reduction in the sheen. This may be due to the greater employment of the soap itself as an emulsifier so that it does not crystallize as readily. The fact that the sheen is due to some crystal formation is indicated by an accompanying softening of the cream.

Additions of auxiliary emulsifiers such as glyceryl monostearate also cause a lessening of the sheen. These additions have become quite popular because of their tendency to better control the evaporation rate of the water if the contents of the jar were exposed for any length of time and because by their inclusion other substances such as lanolin could be added without impairing the stability of the emulsion. These auxiliary emulsifiers serve a secondary function noticeable on application of the cream. One of the most difficult phenomena to control was the "wetting out" of the water phase during application. This is presumably caused by a break in the emulsion after a certain percentage of the water phase had evaporated and is evidenced by a "sweaty" feeling. The addition of substances such a glyceryl monostearate markedly eliminated such a tendency.

Other departures from the classic formula are represented by the substitution for potassium hydroxide

by other alkalies. Triethanolamine is perhaps the best example of this. These creams do not have as great a tendency towards sheen formation as do the potassium hydroxide creams, but are perhaps more stable towards the introductions of other materials. Since triethanolamine forms a relatively soft soap and more soluble soap than does *KOH*, larger amounts could be employed without changing the character of the cream to any noticeable extent. Ammonium hydroxide is also used as a means of emulsification and subsequent distinction of the emulsifier since the ammonia will evaporate with the water. This would leave a film with greater resistance to water than would a soap-containing film. Ammonia types are therefore utilized as hand creams where a water resistant film would be desirable.

The base of the brushless shaving cream is essentially a vanishing cream base, and with so broad a market there is perhaps a greater quantity of vanishing creams made for this purpose than any other single usage. Here again specialized adaptations are made to fit the purpose for which the product is being used. Shaving creams must, as a primary function, be able to wet the beard so that it may be properly softened as a prerequisite before shaving. It therefore becomes necessary to first remove any of the natural oils which exist as films on the beard so that water could more easily reach the hairs. Prior removal of the oil film may be accomplished by washing the beard with soap and water. Addition of the cream following this treatment ensures adequate wetting of the beard. The cream itself acts as a means of keeping the beard soft during the shaving operation. There are a number of preparations on the market which have incorporated in them wetting agents in addition to the soap emulsifier which are therefore not dependent on pretreatment of the beard by washing. Their formulation must therefore take into account the softening properties of such additions on the cream. This tendency has been overcome in some instances by the addition of a sodium soap which would ordinarily cause the cream to be rather hard, in conjunction with the wetting agents which exert an opposite effect. The addition of glycerine or other humectant is indicated since an evaporation medium is needed. As stated above the brushless shaving cream is essentially a vanishing cream adapted for this purpose. The fact that this medium was used is dependent upon the large concentration of water contained in it and because the aqueous medium also serves as a method of best incorporating any further desired wetting agents and humectants.

The vanishing cream base with added qualifications has also been utilized as a vehicle for hand protective creams. In at least one of these products, the vanishing cream base with adaptations is used as a vehicle for a water repellent such as zinc stearate. This adaptation is made possible by a greater concentration of glycerol than is normally used. Such an increase has a tendency towards softening the cream, and therefore compensates for the stiffening effects which otherwise would take place. The resultant film is largely zinc stearate and stearic acid, and the amount of glycerine present does not impair to too great a degree its water repellent activity. This type of cream in addition leaves an extremely smooth feeling film which is also desirable.

Much the same adaptation may be made in the make-up bases which use a vanishing cream base—though it would be better to add mineral oil instead of increasing the humectant content of the cream to too high a level.

All the examples given above are still composed of a soap and stearic acid, which is an akaline medium, but much the same vehicle may be made with other surface active agents, which would be capable of supporting an acid pH. The acid cream is particularly desirable for incorporation of certain medicament which function best in a low pH medium, where indeed they would be destroyed by a neutral or alkaline pH. There are now available a number of non-ionic emulsifiers which are stable in such an acidic medium and which give good results in a vanishing cream. Certain anionic emulsifiers, particularly sodium lauryl sulfite, are good agents for use as neutral pH's, but sulfated bodies (as distinguished from sulfonated) have a tendency towards hydrolysis on long standing at low pH's and this must be guarded against. Catonic agencies of the quaternary ammonium type behave rather peculiarly when treated with stearic acid, but this peculiarity could be the basis of a cream of low pH. They form what appears to be a semi-incompatible substance with evolution of acid causing the pH to fall. The cream however has good thixotropic properties and is capable of good stability, and further capable of supporting in its medium substances which are incompatible with the usual anionic substances.

From the foregoing it may be seen that the descendants of the old vanishing cream bear little resemblance to their parent aside from the fact that it is still used as a vehicle in solid form containing large concentrations of water. As such it is the basis of many of our creams, notably hand creams and boundless shaving creams as well as a medium of incorporation of substances at any desired pH. The additions of monoglyceridic or other emulsifiers also enable the vehicle to hold fair quantities of other substances, particularly lanolin, which before their advent was difficultly incorporated.

BLACK STAR PHOTO

STUDIES ON ACTH AND CORTISONE*

By Dr. George W. Thorn

HERSEY PROFESSOR OF THE THEORY AND PRACTICE OF PHYSIC, HARVARD UNIVERSITY MEDICAL SCHOOL; PHYSICIAN-IN-CHIEF, PETER BENT BRIGHAM HOSPITAL.

IF ONE has a disturbance in one endocrine gland, then one has the possibility of not only having functional disturbance due primarily to that hormonal deficiency or excess, but the very great likelihood of having an associated chain of disturbances due to the imbalance.

In aging years, while we have very little evidence of the actual changes in hormonal function other than gonads, I think it is important to classify endocrine disturbances in terms of what you might call physiological concentrical alteration in function which produces minimal symptoms as compared to the patient who has a persistence of normal activity into late years, or an excessive activity or, on the other hand, deficiencies. So that disturbing symptoms come more from a disturbance in function of one gland than they do from a considerable disturbance in function of all where there still remains a reasonable amount of control.

I think it is very important to recall that in the normal individual we have a system which causes the secretion of adrenal hormone with an output of 11 oxy-steroids which are the small amount of hormone in the urine, and the 17 keto-steroids which, while not synonymous with androgenic substances, represent to some extent that group. These are about the normal relationships that we expect to see in most individuals.

When we give ACTH we stimulate the adrenal tremendously. If the ACTH is effective and if the adrenal is capable of response, we cause a large adrenal with a large outpouring of both hormones. When we stop treatment we may have a short period of relative inactivity, but we have to visualize that that gland has been stimulated to great activity and the period during which there is decreased secretion is relatively small.

On the other hand, when we give cortisone we inject material at this point. Cortisone has an effect in reducing the size of the pituitary and thereby re-

*Delivered March 15, 1951, at Conference on Clinical Problems of Advancing Years, Smith, Kline & French Laboratories, Philadelphia.

ducing the size of the adrenal. We give a particular compound secreted by the adrenal and we therefore increase the 11 oxy-steroids but we do not necessarily increase the 17 keto-steroids.

If we maintain treatment in high dose for a prolonged period, one would expect to have a rather slow recovery when the hormone is withdrawn. We use ACTH therefore to help stimulate the adrenal to come back to normal at the termination of a period of cortisone therapy, which is a good practical application of these principles. In other words, some pituitary stimulation of the adrenal will reduce the period of adrenal insufficiency after cortisone therapy.

The important thing, since the supply of cortisone is limited and since over-dosage phenomena are to be avoided if possible, is to realize that with small doses of cortisone one may merely replace the adrenal's own secretion and end with some reduction in pituitary activity.

I would consider in most intances that a dose of 25 mg. of cortisone daily would fall into the range of doing nothing other than replacing externally administered hormone for endogenously secreted hormone in all patients except those with Frank Addison's disease or adrenal insufficiency. Twenty-five milligrams of cortisone is the amount that a patient with Addison's disease needs to live on. That is an adequate daily maintenance dose. Now to get the pharmacological effect of cortisone, which is different from the replacement therapy, one must give generally doses much larger than 25 mg. and one thinks in terms of 50 mg. as being the minimal level and 100 mg. as being more nearly an excess. It ranges all the way up to doses of 500 mg. which we are now using in certain severe cases for a short period of time. So that anything in the range of 25 or 30 mg., one should be very suspicious about changes which are observed under those circumstances.

Now briefly a word about the adrenal cortex relationship to the thyroid and islet cell. We have observed that if you give ACTH or cortisone over a prolonged period there is a reduction in thyroid activity. This may be measured by the iodine up-take of the thyroid gland. We give a tracer dose of iodine. The normal patient takes up a large amount of that tracer dose. The protein-bound iodine is a means of measuring the thyroid hormone circulating; under prolonged high dosage of either ACTH or cortisone there will be an inhibition of thyroid action in a good many patients, as illustrated by this patient, in the reduction of iodine gradient and reduction of the protein-bound iodine and in the fall in basal metabolic rate.

That means then that physiological hypothyroidism may be a concomitant in patients who are treated with ACTH or cortisone over a prolonged period of time. The doses must be large, the period of treatment must be a continued one, and we suspect that the mechanism is also pituitary inhibition by the action of these adrenal steroids.

That brings up an interesting change which we often observe and which has some application in our problem of old age, namely changes in cholesterol

(Continued on page 516)

BLACK STAR PHOTO

DRUGS IN NEUROMUSCU

ABNORMALITIES and impairment in motor functions are of particular importance in geriatrics. Disorders of the motor system accompany diseases in advancing years with greater frequency than at other stages of life. A specific therapy for many of these disorders is at present unknown and even symptomatic or palliative treatment leaves much to be desired, as it is for the greater part empirical, lacking a rational basis.

This is not a report on new wonder drugs of the order of antibiotics, nor can we reasonably expect miracles since we are dealing with chronic degenerative diseases of the central nervous system. The task of finding more effective drug therapy for a number of those diseases and conditions can be approached by the experimental therapist and pharmacologist from two angles:

First, knowledge of the neuropathology of the diseases and second, from the great advances made in recent years in our understanding of the neuro-physiological function of almost every part of our central nervous system.

The achievements of neurophysiology, in particular newly created methods and concepts of organization of the nervous system, offer to pharmacology new means to explore with accuracy and confidence—greater than at any previous time—the mode and site of action of drugs.

Such studies comprise not only traditionally accepted drugs but are being extended to exploration of new compounds. These possibilities have awakened interest in increased research in therapy by the medical scientist, accelerated by the support of many organizations, private and public.

What are the pathological entities for which we seek a new therapeutic approach? Among the many motor disturbances seen in older patients, Parkinson's syndrome stands out. The familiar tremor at rest and the incapacitating rigidity are based on degenerative lesions of the larger ganglion cells commonly concentrated in the Substantia nigra and the globus pallidus, but also occur in the corpus striatum, motor cortex, and even in the olive and thalamus. It is essentially a disease of the extrapyramidal system, particularly the basal ganglia.

MUSCULAR DISORDERS

By Dr. Kaous R. Unna

PROFESSOR OF PHARMACOLOGY,
UNIVERSITY OF ILLINOIS COLLEGE OF MEDICINE

Chorea, athetosis, and hemiballismus are related, much rarer, degenerative processes of this basal ganglia region. Wilson's disease (hepatolenticular degeneration) is a similar syndrome also associated with liver pathology and other systemic changes. Atrophic cerebellar disease is a slightly more diffuse process. Senile tremor is a motor syndrome of advanced years. Focal lesions chiefly in the spinal cord resulting in multiple sclerosis, syringomyelia, and syringobulbia more often occur in younger people.

Vascular pathology in the brain and cord results in hemiplegia and paraplegia and the rarer pseudobulbar palsy. These types of lesions may, depending on localization, cause any of the aforementioned syndromes.

Neuropharmacology:

A brief review of advances in neurophysiology indicates the wealth of new knowledge and new methods available to the experimental pharmacologist for the study of mode and site of action of drugs. His task is the finding and characterization of more selective agents. The differentiation of the functions of certain parts of the central nervous system has made it more likely that agents can be found which selectively affect certain areas or functional groups and spare others.

As an example, drugs alleviating motor dysfunctions, should spare the cortex and be devoid of cortical depressant effects. Barbiturates, for instance, are excellent depressant agents; their manifold sites of action have been extensively studied. However, they are not sufficiently selective and will, in effective doses, also cause somnolence and impair consciousness.

Memphensin, the ortho toluyl esther of glycerol, has recently been intensively studied. The first observations of its discoverer, Berger, reported its paralyzing effects and its antagonistic action upon strychnine convulsions.

It was then found by our group and by others that this substance depresses interneuron activity at the spinal level. Its depressant action at this site appears to us the predominant effect of mephenesin. Its selectivity contrasts with the lack of selective action of barbiturates.

Interest in selective depression of interneurons has brought forth a number of new compounds which together with mephenesin form a new class of central nervous system depressants. Unfortunately, they do not have great potency in man. Therapeutic results in the hand of critical observers have been disappointing. However, the search for more potent agents of this type of action is vigorously pursued, and treatment of spastic conditions by depression of interneurons offers intriguing possibilities.

Belladonna alkaloids introduced into therapy of Parkinsons syndrome in 1882, and still on an empirical basis, are among the most useful drugs for this condition. The action of cryoscin or of mixtures of belladonna cannot be distinguished from atropine. The concept of humoral transmission of nerve impulses in the autonomic nervous system has clarified the peripheral site and mode of action of atropine. Does the theory of humoral transmission apply to the central nervous system? And where does atropine act in the central nervous system? We have some evidence that atropine moderately depresses the cortex, probably depresses the upper part of the brain stem, but that it stimulates areas in the lower brain stem.

This latter may be due to depression of the hypothalamic autonomic center which releases the medulla from this higher control. The crucial area for tremor and thus for atropine's action is probably in the upper brain stem, the mesencephalon and the pons. Therefore, studies of the effects of drugs, and particularly of atropine, on the Lingulo-Mandibular reflex whose central connections like in this region should bring some interesting results. Are effects of atropine at these sites explained by its known blocking effect on acetylcholine-transmitted stimulation? Further research on atropine may not only localize more precisely its site or sites of action, but may well shed light on central synaptic transmission.

Apomorphine is another agent challenging hemopharmacological manifestations. It is known to cause vomiting by stimulation of the brain stem reticular formation in which the vomiting center is located. Recent experiments have indicated that apomorphine will inhibit tremor in monkeys and Parkinsonian patients. Since this drug has many actions which are the opposite to those of atropine, it would appear that there may be two distinct mechanisms by which tremor can be controlled.

One hypothesis for the cause of tremor postulates a rhythmic imbalance of facilitatory-inhibitory circuits. Thus the balance could be restored by either of two opposite effects. Since apomorphine stimulates and atropine depresses the tremor area, these ideas appear mutually consistent.

Synthetic derivatives of atropine have been produced in great number for many years in order to obtain spasmolytic drugs which more selectively than atropine depress smooth muscle function. Recently some smooth muscle depressants have been introduced and advertised

(*Continued on page 531*)

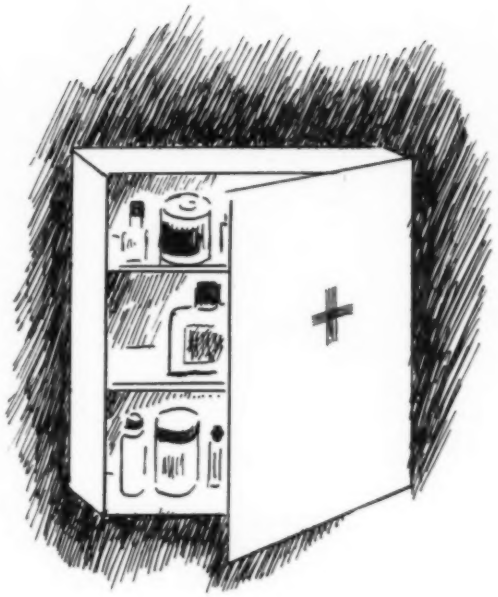
*Delivered March 15, 1951, at Conference on Clinibal Problems of Advancing Years, Smith, Kline & French Laboratories, Philadelphia.

SYNERGISTIC ACTION

I DO not wish to decry the use of single drugs in therapy. Clearly enough if one can relieve a patient of his or her misery, or any physical or mental impairment by simple means, there should be a good reason before adopting complex remedies. Unfortunately the real barrier to effective single drug therapy lies in the impossibility of determining exactly the cause or the mechanism of the trouble. Do not let the wonderful advance of medical science fool you. Truly it has taken us into many dark places, pulled up the shades and let in the good light of reason, reason based on causality, thus driving away the shadows of chaos and capricious randomness. Yet each time this happens we find a new door leading us again into obscurity and doubt. Let us take a lesson from the great tool of science, mathematics. The development of this subject parallels medical advance in one sense; that is the more you learn, the more you find there is to be learned. Finally, the mathematicians faced with complications beyond human physical powers to disentangle, invented and caused to be built gigantic machines of incomparable complexity with which to deal with formulae, the worst of which are probably only fragments necessary to describe fully the complexities of the physical and chemical processes of human life.

Medical science has no such machines with which to analyze fully human disorders, in consequence diagnosis must still be the comparison of largely empirical pictures of recognizable diseases, and thus is still chiefly of a simple empirical type. Fortunately for us and other biological species, most of our tissues intrinsically contain their own repair and maintenance function. Consequently most disorders, of transient cause, pass away by themselves and the most important job of the physician is to facilitate this and make life easier for the patient while it takes place. To illustrate this matter, take for example the symptom headache. Causes of headache are numbered literally by the hundred. Even if it were scientifically possible, it would still take so much time and effort to make a really accurate analysis of the cause of any given headache that two things would be occasioned. The first is that most of the headaches would have disappeared by the time the cause was located; and the second is that the solution of this

*Delivered before the Scientific Section, Proprietary Association.



N OF DRUGS*

By C. S. Gibbs, M.D.

GIBBS MEDICAL RESEARCH LABORATORY, MEMPHIS, TENN.

problem, akin to some complex mathematical formula, would be an economic impossibility.

Fortunately for us empiricism steps in, and many headaches of unknown cause and unknown mechanism are relieved by the administration of some drug or another. We are especially lucky to have aspirin and caffeine as both drugs are entirely safe and peculiarly effective, though as yet by unknown means.

Obviously one of the most important matters in this connection, and one the proponents of government controlled medicine always evade, both before they have sold their medical gold brick to the public, and after the suckers are entrapped, is the distressingly hard head of economics. Of the hundreds of millions of headaches that yearly affect the American people, only a microscopic portion could be subjected to even the present day pseudo-scientific clinical examination, for there simply isn't enough man-power available for the remainder. Either the headaches, and similar symptoms get treated by the empirical use of drugs, or to-day, not at all, except only in a very few of the selected members of society.

Clearly enough the sensible thing to do, in these relatively trivial cases, unless there be some good reason otherwise, is to try some simple safe remedy, like aspirin, and see if it works. If it does, good! If not, try some other good remedy of which, in our fortunate country, a variety exists. Clearly enough some headaches have some obviously associated cause and the combination of an analgesic like aspirin, with an attack on the cause, such as an ant-acid, or a laxative, or some other suitable drug is a matter of common sense.

In other words in the hiatus of medical knowledge, and the complexities of medical science, we deliberately fire a therapeutic gun at the covey of causes. And, since there are many possible causes, often we use to better advantage a shotgun rather than some precision single drug rifle.

While therefore, I, like all scientists, like to keep my factors as few and as simple as possible, which naturally includes my medicines, I do not for a moment believe that simplicity is essential to good practical remedies. To try and force Drug Therapy into the narrow single drug track seems to stem either from some emotional appeal or from a failure to recognize pertinent facts, amongst which of the highest significance, is economic reality. One can try the effects of half a dozen good available remedies for the price of a single visit to a doctor, who in most cases is probably not much more able to ascertain the cause of your particular headache than you yourself, and who in the first instance will try similar remedies in order to facilitate his diagnosis.

Remember, of course, I am speaking of transient symptoms, which nevertheless are the bulk of those that affect us. Any symptom that persists, or recurs, indicates a materially uncompensated functional condition, some of which are immensely serious, and all are worthy of professional investigation.

Suitably chosen combinations of drugs working towards a common end is thus not only a sound procedure, but with certain medical targets the best one since such will affect a wider range of causes than a single drug can achieve. However, the attempt to get into one bottle, or one capsule, pill or wafer all the claims that our advertising friends would desire, is denied both to us, and very fortunately to themselves, for if this were possible they would have but one simple song to sing, and they would, as also under political medicine, like any unused function, atrophy down to an inconsiderable size.

Everything we do should be controlled by reality. By a careful evaluation of facts, or figures, and very importantly of quantities. In consequence in the design of some useful remedy, a target of reasonable dimensions must be the objective of our aim. In professional medicine we deem that a disease that has many remedies is probably not well treated by any. We may also safely assume that too many claims for a non-professional remedy suggest none are of any real value. In the design of any given remedy, two fundamental scientific matters must occupy our attention. The first is entirely basic and consists in the appreciation that any functional level is the result of a number of opposing forces.

(Continued on page 533)

TECHNICAL SERVICE IN B

THE prime purpose and over-all objective of Technical Service to the Pharmaceutical Industry is the development and dissemination of information. It is proposed in this paper to discuss Technical Service, that is, information service, under three major headings. First, the kind of information which is supplied, second, how this information is obtained and third, how this information is made available to those who can make use of it. Considerable emphasis will be placed upon the facilities which are brought into play in this process, and some attention will be paid to typical examples which illustrate the philosophy and also the practical functioning of this kind of activity.

In order to be effective, Technical Service must collect, analyze and issue the kind of information of most interest to the industry. The Pharmaceutical Industry is interested in four principal classes of information, namely, 1. pharmacological, 2. clinical, 3. pharmaceutical compounding, and 4. analytical procedures.

Pharmacological data establish a reasonable expectation of, first of all, safety and secondly, therapeutic value. This information is useful to the Pharmaceutical Industry in helping the making of a decision as to the desirability of conducting clinical investigations of the product concerned. A recent example of pharmacological information of immediate and practical interest is a group of reports on the blood levels of para-aminosalicylic acid, obtained after administration of the drug in different forms and under different dosage schedules.

The second class of technical information comprises clinical data. This type of information, of course, is required in order to assist the Pharmaceutical Industry in deciding upon the advisability of developing a pharmaceutical preparation incorporating the active principle concerned. Illustrative of this type of information was a recent brochure dealing with the use of folic acid in megaloblastic anemia of pregnancy. This brochure comprised a collection of clinical reports to the effect that megaloblastic anemia of pregnancy is primarily a folic acid deficiency and quoted authorities to the effect that folic acid had never failed to provide immediate and usually dramatic relief from this type of anemia, contrary to the experience with vitamin B_{12}. This information had a direct bearing on the formulation of vitamin-mineral products intended for prenatal supplementation.

The third class of technical information is pharmaceutical information, that is, information relative to the compounding of pharmaceutical preparations. This includes data regarding the solubility of a product, its stability in the solid as well as the dissolved state under various conditions, and its compatibility with other medicinal agents with which it might be reasonably combined. While this type of information becomes of immediate interest to the Pharmaceutical Industry only after favorable clinical data have been developed, actually the time consumed in establishing many of the needed facts is so long that work along these lines must be begun before clinical investigation is complete. In fact, the development and proving of a pharmaceutical preparation may be a more time-consuming job than the clinical establishment of the value of a drug. This is true because pharmaceutical preparations must necesarily maintain their full therapeutic potency as well as their desirable color, odor, and flavor characteristics for a minimum of one year. Despite the use of accelerated storage tests, usually the only way to establish this stability positively is by actually storing samples for the one-year period. A more detailed discussion of pharmaceutical compounding will be presented later on in this paper.

IN BULK PHARMACEUTICALS*

By George H. Schneller

DIRECTOR PHARMACEUTICAL APPLICATION, AMERICAN CYANAMID CO., CALCO CHEMICAL DIVISION, BOUND BROOK, N. J.

The fourth class of technical information deals with analytical methods. This may deal with the analysis of the basic medicinal chemicals themselves. Illustrative examples were a report on the unsuitability of the melting point as a criterion for purity of para-aminosalicylic acid, and a report on a new method of assay for choline salts. The second type of analytical information is that pertaining to the determination of an active ingredient in a finished pharmaceutical product, for example, the chemical or the microbiological determination of folic acid in a multi-vitamin preparation.

The second major subdivision of the subject deals with the manner in which this technical service information is obtained. The first and most important source of information is the published literature. The world literature in the fields of pharmacology, clinical therapeutics, pharmaceutical compounding and analytical chemistry is the most frequent single source of information in these fields. Literature searching, therefore, plays a very important part in Calco's Technical Service activities. In the performance of this function the Calco Library is a considerable factor. It has a representative collection of journals in the medical and related fields. The library staff maintains index files on subjects of major interest, prepares and circulates abstracts of leading articles, and contributes in many other ways to the collection of information. The libraries of other branches of the Cyanamid organization also provide material assistance from time to time. Several leading medical and chemical libraries in near-by locations are available to supplement these Company facilities.

Two separate approaches to literature searching are employed, each with a different objective. One approach involves carrying out an extensive search on a single topic. The purpose here is to prepare a comprehensive historical review of a given development in medicinal chemistry and an evaluation of its current status, together with a summary of those physical and chemical properties which must be considered in the formulation of pharmaceutical preparations. Three or four of these reviews are published yearly in the form of "Calco Technical Bulletins." The other approach involves the systematic perusal of current issues of medical, pharmaceutical, and chemical journals in a search for newly published reports bearing on Calco products and presenting information of potential interest or value to the Pharmaceutical Manufacturing Industry. The most timely of these are condensed in a monthly news letter which is issued to a wide segment of the industry.

The Technical Service Laboratory is, of course, a very important source of pharmaceutical compounding information and, to a certain extent, of information regarding analytical methods. This laboratory is a relatively new development at Calco and it has undergone steady expansion over the past few years. When the products of the Calco Pharmaceutical Department included ony sulfa drugs which were at that time given almost exclusively in tablet form, there were few compounding problems and it was not necessary to maintain a separate Technical Service Laboratory. However, as the scope of Calco's interest increased and newer and more complex products were developed —that is, complex with regard to the greater variety of

(*Continued on page 541*)

*Read before the Research and Development Section, American Drug Manufacturers Association.

These handmade bottles, available in seven sizes from one dram to eight ounces, are excellent containers for perfume and toilet water. They can be supplied with attractive, fired-on ceramic labels.
CARR-LOWREY GLASS CO.
Designers and manufacturers of fine glass containers
Factory and Main Office: BALTIMORE 3, MD. • New York Office: 40 W. FORTIETH ST. • Chicago Office: 1572 MERCHANDISE MART

PACKAGING AND SELLING

IT'S A FREE COUNTRY

Under the title of merchandising many businessmen who directly serve the public are making some pretty extravagant experiments. In some parts of the country new retail structures have a glamorous costliness that can hardly be equaled in any other kind of public or private building. Some suburban developments are competing as a unit to attract traffic with many kinds of extravagant services and entertainments. A Long Island Launderette seems to come very near establishing the record for super, extra and ultra services of this kind. If based upon the unit of sales, it undoubtedly is the record. For instance, outside of the coin operated Bendix washing and drying machines, which is the basic service that justifies this business' existence in the community, there is a linen rental service and a dry cleaning shop; there is also a large coin operated "baby sitter". This is a play pen which can hold a dozen children and when a twenty-five cent piece is inserted, the gate swings open to let in the child. A trained nurse is on duty to watch the children and is supposed to do all the necessaries.

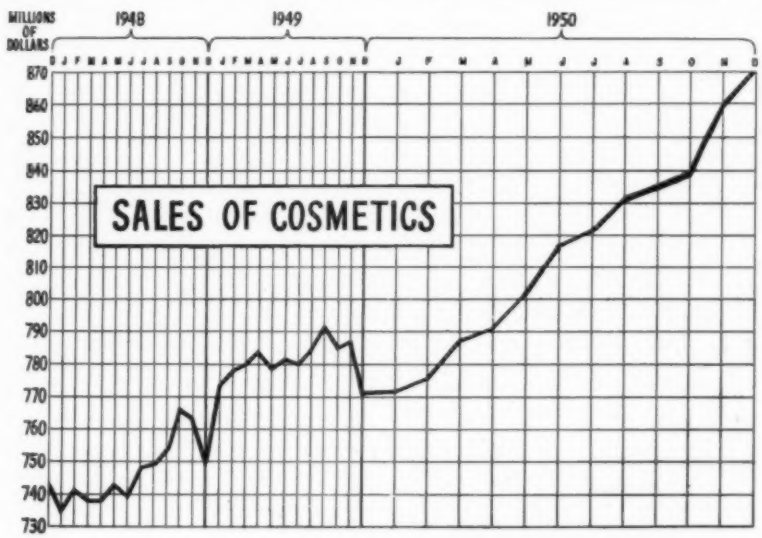
While the washing is being done, a television provides entertainment or sewing machines are available for sewing. To top all this, the Launderette sells a wide selection of frozen, precooked dinners which with a little warming can be served at home. In the summer provision is made for outdoor play space for the children.

Many great retail enterprises have had obscure and curious beginnings. This Launderette may be going overboard with services which these coin operated washing machines can't support or provide necessary traffic for. On the other hand, since we are in a period where shoppers, at least for the time being, seem to accept all sorts of crossing in retail lines, perhaps these ambitious folks are going somewhere. If the grocery supermarket has its eye so enviously set on so many different retail classifications, including apparel, why shouldn't the Launderette emerge into a new type of retailing.

The new president of the Childs restaurants expressed complete horror at the thought of all these restaurants in their prime locations devoting their windows to a few potted geraniums. One of the first acts of this new management was to purchase the Louis Sherry Candy Company and now Childs has windows which sell package merchandise and interior counters which sell packaged merchandise.

This intense restlessness of so many merchandisers at the thought of any display position, in any kind of an enterprise, exposed to public traffic not operating to sell goods is apt to lead us into some very extreme and adventurous experiments. Or is it evolution? On the other hand, one leading department store executive stated the other day that we are inevitably headed for a return of the one-stop country general store in the effort to provide the consumer with everything they will possibly need on the first stop that they make.

Retail sales of cosmetics for the twelve months ended with December 1950 totaled $869,591,000. This compares with $859,486,000 for the twelve months ended with November 1950 and with $770,794,000 for the twelve months ended with December 1949.



Television Packaging

Television is playing an increasingly important part in advertising and this in turn is bound to have a major influence in packaging design. Just recently Leonard Wheeler, a packaging consultant, outlined some of the problems in packaging identification in television programs.

According to Mr. Wheeler, designs should be simple for best reproduction. This applies equally to space divisions, lettering and illustration. The danger of losing definition increases in direct ratio to the increase in the brightness and purity of hue. Any color with a reflectance factor of less than 50 per cent will reproduce well.

In testing groups of colors, with each color having three shades, the following results were shown:

Red appeared nearly equal in value and carried more color than expected.

Orange registered rather well. The more yellow in the hue, the higher the reproduction value. Yellows wash out much more than reds.

Browns give varying results. The presence of blue or green gives darker reproduction values.

Greens tend to wash out in proportion to the yellow in their make-up. Blues reproduce well and a rich black value can best be obtained by using deep green-blue combinations.

While effective color as appears in black and white television is bound to be an important factor in future package design, this will be far more intensified as color television comes to the front.

In addition to the color problem the whole question of design so that a clear package image will be produced without the blurs that tend to develop with small type, reverse printing, and script will come in for detailed study.

Perhaps television, as it becomes more and more potent in identifying the brand and the package to the public, will open up a completely new era of package redesign.

Inflation

Dr. West's Tooth Brushes has retained the same prices at wholesale and retail for 30 years and until December of last year, when increased costs compelled increased re-sale prices.

During this period Weco has passed through three major wars, two major depressions and three or more booms.

Tin not Speculative

Tin producers, according to "well informed circles", don't like the American accusation that they are to blame for skyrocketing price increases of tin. Producers, they are reported to have stated, can not manipulate prices, while speculators can not have been responsible for the long-term upward curve of tin prices. Tin prices, as those of most other commodities, have been dependent on political developments and connected factors. Therefore, American allegations as to a price increase of more than 150 per cent in the price of tin since the Korean War, according to these informed producing sources, are misleading and tendentious.

We suppose if Americans complacently let another 100 per cent increase be tacked to this speculative merry-go-round, any criticism of these increases would also be considered misleading and tendentious and maybe even contumacious.

Non-Spill Nail Polish

A new feature has been added to the Cutex nail polish bottle by Northam Warren Corp. which prevents the polish from spilling when the bottle falls over. This new *Spillpruf* bottle has a valve-like structure within the neck which

permits the insertion and withdrawal of the nail brush but checks the flow of polish. When the brush is removed from the bottle, moreover, the pressure applied by this valve is just enough to leave only enough polish on the brush to cover one nail. This may mean the end of sticky bottle tops due to dripping brushes, and frayed nerves due to the fear of upsetting a bottle of polish.

Differential Discounts

The anti-trust case against the Standard Oil Company of Indiana, involving the issue of different discounts for different services, has finally been settled by a Supreme Court decision favorable to the Company. This is a case in which the Federal Trade Commission filed a complaint stating that the Company was allowing a higher discount to a jobber than it was to a retailer. This case was complicated by the fact that some of Standard's jobber customers owned and operated retail outlets.

Although the FTC claimed that it was not proceding against differential discounts based on differential kinds of services such as retailers and jobbers, all of their actions pointed definitely in that direction.

The Supreme Court decision completely vindicated the Company's position. The Court said: "Congress does not seek by the Robinson-Patman Act either to abolish competition or so radically to curtail it that a seller would have no substantial right of his defense against a price raised by a competitor."

This action is not entirely ended. The FTC in this investigation refused to consider good faith as part of the Company's defense. In this case good faith entered in because, although it was evident that the Company was giving a competitive price advantage to the retailers owned by the jobber in giving this jobber a wholesale discount which the jobber passed on to its own stores, nevertheless the Company was prevente dfrom adjusting this situation by other competitive bids to this jobber from competing oil companies which Standard was compelled to meet.

The Supreme Court, following its decision, has directed the FTC to make a finding on the question of good faith which it had previously ignored as immaterial.

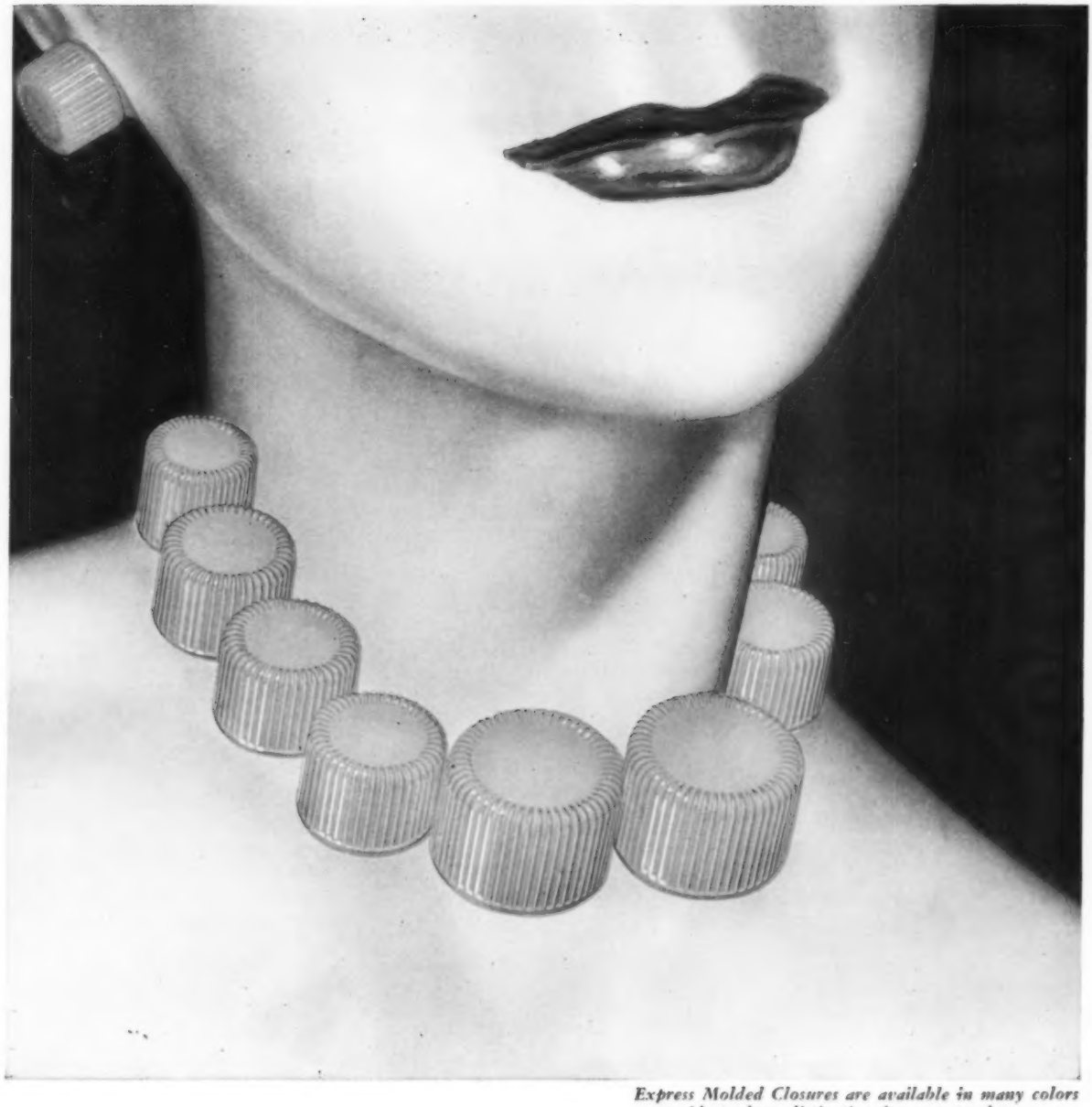
Bald Domes Attract

Science is a wonderful thing and when it gets down to levels that the layman can understand, it's just as apt to be as interesting as any of the modern best selling fiction. That famous bulletin which the Department of Agriculture put out some years ago on "The Love Life of the Bullfrog" has now been supplanted by some scientific research of the Canadian Government on what makes a mosquito bite. Dr. Brown of the University of Western Ontario has been studying mosquitoes up in that part of Canada where mosquitoes land on a visitor at the rate of 200 a minute. Dr. Brown took along with him two robots that were dressed in mens' clothing and made to simulate human breathing. Chief among Dr. Brown's findings is the fact that a mosquito would just as soon land on a heated billiard ball and begin digging as it would on an individual. Possibly one of the commercial results from this experiment will be a bright advertising idea for some hair tonic manufacturer.

Estimating the Power of a Woman

Women don't own 70 per cent of the stock of United States industry, nor inherit 75 per cent of the real estate, nor have 65 per cent of the savings accounts of the nation, according to Dorcas Campbell, Assistant Vice President of the East River Savings Bank. Nor do women purchase 80 per cent or more of the goods consumed by the family, and our statistics on ownership or wealth by women and influence in the purchase of the homes are equally outmoded, inaccurate and about as reliable as back fence gossip, continues Miss Campbell.

Can it possibly be true that those cynics and rebels in advertising and selling who still continue to underestimate the power of a woman might have something after all?



Express Molded Closures are available in many colors —provide package distinction for your product.

For that extra smart look—use molded closures

GIVE your product the attention it deserves by dressing it up with new Owens-Illinois plastic closures.

Many unusual molded closures are available as stock items in brilliant colors for matching or contrasting with label designs.

O-I plastic closures won't rust . . . won't stick, and they give a more positive seal and reseal. Molded to exact specifications, private designed closures can be tailored to the most rigid production requirements.

CLOSURE DIVISION — OWENS-ILLINOIS GLASS COMPANY

TOLEDO 1, OHIO • BRANCHES IN PRINCIPAL CITIES

THERE'S ONE HERE FOR YOUR PACKAGE

Armstrong's Artmold® Plastic Caps are available in all standard sizes—8mm to 100mm. For samples or prices, see your Armstrong representative or write to Armstrong Cork Company, Glass and Closure Div., 1904 Prince Street, Lancaster, Pennsylvania.

ARMSTRONG'S *Artmold* PLASTIC **CAPS**

Double Billing

A great deal of furor has recently developed in newspapers and to a lesser extent in magazine circles over double billing in cooperative advertising.

According to some folks, this practice is pretty widespread. According to others, the majority of retailers operate in an ethical way which would not permit this practice to be prevalent.

Double billing takes place when a retailer collects more money per line for the co-op ad from the manufacturer than he is paying to the publisher.

When a smaller retailer contracts, for instance, for 50,000 lines and honestly charges the manufacturer the price he has received from the newspaper on this quantity discount and then later discovers to his surprise that he has used 100,000 lines and then receives a rebate from the newspaper, this situation doesn't, in the eyes of most publishers, constitute double billing. It is only when the store from the beginning of the year conceals their true rate, and gives manufacturers a higher rate, that double billing takes place.

Some time ago, we stated a specific case of an unnamed store where the general manager of that store bluntly stated that handling cooperative advertising was a store expense, that there was no reason why the store should not make manufacturers cover this internal expense and that as a matter of fact there was no reason why the store should not make a profit for their services. He cited a markup of 15 per cent as a fair average on the advertising and then continued to say that the store should make this 15 per cent on any preparation such as copy or art work and on any form of interior store display which they develop for the manufacturer. He even thought it might be a good idea to encourage manufacturers to use the store services in these departments.

Since very few department stores operate on a net profit of as much as 4 per cent, we observed at that time that a well developed department of this sort netting 15 per cent might very easily exceed the net rates of any other department in the store and would therefore warrant an aggressive development which would pile new woes and confusion on the conduct of cooperative advertising.

Of course, there is another point of view to be held on this subject. There is so much confusion and waste in co-op advertising that if any store would ever handle it on a truly efficient basis and make this advertising truly cooperative in that there was some coordination and follow through with the right department and with display and with alerting the sales clerks at the time the advertising appeared, that this 15 per cent could turn out to be a very economical addition to the co-op bill.

Packages with "Sell Appeal"

Among the winners of the 15th Annual Variety Merchandiser Packaging Awards Competition were the Cutex Gift Set package of the Northam Warren Corp., and the Wildwood Lotion bottle of the Superior Products Co. which was designed by Dwight Fuerst of the Owens-Illinois Glass Co. These two packages won Honorable Mention in the Cosmetics and Toilet Goods division, being topped by a razor set of the American Safety Razor Corp. which won first prize.

Altogether there were four first-prize winners and eleven honorable mentions, counting winners outside the cosmetic field.

Easy Shopping

Speeches by retailers nowadays almost always seem to turn to an analysis of the new shopping habits that appear to be developing in America.

Many retailers believe, for instance, that the woman shopper today is more and more demanding a one-stop shopping place. Others are convinced that there is a substantial decline in store loyalty just as there is a decline in brand loyalty. As a matter of fact, extensive research by a number of large building and real estate interests in search of sites for suburban shopping centers have shown rather clearly that women are perfectly willing to transfer their allegiance from old established, trusted retailers for very small concessions in the way of convenience in shopping. In these consumer surveys, parking facilities and distances to the store seem to be pretty conclusive factors in switching consumer buying traffic into new channels.

Other retailers who are in a position to turn more and more to self-service or even automatic buying are convinced that the time element of a retail transaction is becoming more and more important in shopping. According to these retailers women are showing less inclination to shop for shopping's sake and less tolerant with standing around waiting for a clerk or devoting ten or fifteen minutes to a transaction that should take one or two minutes.

Still others believe that the development of a one-stop shopping place such as seems to be the objective of some of the supermarket operators and the reduction in the time it takes for a transaction such as the women receive in open display self-service is not the entire answer. These people claim that the woman shopper is still compelled to go out of her way to go to the seller's place and that the ideal final solution would take place when the retailer goes to the customer.

In the last ten years we have seen a phenomenal development in house-to-house selling in quite a number of diversified lines. In some parts of the country small independents have put retail stores on wheels, notably grocery stores and have opened up a suburban route. This, of course, is a revival of the wagon companies such as Watkins and many others and a transference of this to the city.

We read a little while ago that an Illinois firm has been making quite a record selling Hammond organs in just this way. An old bus was converted into

The Handiest
Bottle Ever Made!
Manufactured Under Pat. No. 2,515,093
Other Patents Pending
ELMER E. MILLS CORPORATION'S
Polyethylene
Plastic Bottle
This is *the* bottle with consumer appeals so strong they actually help sell your product!
It's unbreakable—a powerful consumer selling point on safety and thriftiness.
It's lightweight—takes up less space (and incidentally cuts your shipping cost).
It's a "squeeze bottle"—can be readily adapted to use as a stream—as a spray—as a sprinkler finish.
Our stock bottle is available in 1—2—4—8 ounce sizes. Through a special printing process we can print your label or design right on the bottle.
In addition to the production of this stock bottle and stock closure, we also custom make other thermoplastic bottles, closures and atomizers. You can depend upon their being made with the same high standards of craftsmanship which keynote all Mills plastic products.
For more information on our custom molding service, or for a free sample bottle, write us or our sales agent today.
ELMER E. MILLS CORPORATION
2930 N. Ashland Ave., Chicago 13, Illinois
Sales Agent: W. BRAUN & COMPANY
Chicago, 300 N. Canal St.
New York, 595 Fifth Ave.

a rolling showroom that travels through six counties. This bus visits a community where the company knows that at least one person is interested in buying an organ. It picks up that one sure prospective customer and then rides about the community picking up others who might be interested in an on the spot demonstration and a purchase of the organ. Before the mobile salesroom arrives, local ads tell the community that the "Hammond man in the Hammond van" is coming to town.

Chain Dep't Stores

Department stores generally have been avoiding classification as chains by the use of a semantic term, suburban branches. While it is true that in most cases this is a true designation in that the new stores are branches and that they are located in adjacent suburbs, nevertheless it is true that many leading department stores are embarked on a program which means that they must come under the classification of chain enterprises.

These new department store chain units are interesting in that they give many downtown stores, located in rather ancient buildings, a chance to experiment with modern architecture, modern store planning and modern methods of materials handling.

Strawbridge and Clothier was one of the first department stores in America to open suburban branches. It will soon open its newest and largest in Wilmington, Delaware. Maybe Philadelphia likes to think of Wilmington as a suburb, but as a frequent visitor to that attractive small city we don't think that they will find any of that sentiment among Wilmington residents.

This new store will have all of the characteristics that seem to be associated with department store branches. There will be adjacent parking space for approximately 3,000 cars, flanking the building on both sides, tea room facilities, an auditorium available for womens' clubs and civic uses, escalator and elevator services, daily delivery services, air conditioning throughout the building, a medical room for emergency aid and an all-weather canopy at the entrance for customers' protection.

The building itself is contemporary in architecture, all field stone with limestone and granite trim. The utmost in modern convenience, comfort and charm will be featured in all fixtures and equipment, in counters and display. Colors will be cheerful pastels. Comfortable and pleasant lounge and cafeteria facilities will be provided for employees as well as a well equipped medical service. Receiving and loading platforms will give trucks direct access from the highway.

Department of Commerce Monthly Retail Trade Report

Retail sales of all kinds in drug and department stores showing sales for the month of January 1951 as compared with the same period in 1950.

	Department Stores	*Drug Stores*		*Department Stores*	*Drug Stores*
Atlanta	X	+3	Minneapolis	+31	+6
Baltimore	+26	+12	Milwaukee	+29	+12
Birmingham	+25	+7	Newark	+37	X
Boston	+31	+2	New York	+29	+9
Chicago	+28	+10	Philadelphia	+31	X
Cincinnati	+29	+7	Pittsburgh	+46	+7
Cleveland	+38	+15	Providence	+32	+4
Dallas	+33	-1	St. Louis	+30	X
Detroit	+42	+14	San Francisco	+31	+14
Los Angeles	+27	+6	Seattle	+60	+26

Cold War on Fair Trade

Fair trade has been having its troubles lately, but so far there is nothing concerted about the assaults that are coming from different quarters. Even these attacks are a little surprising because in periods of inflationary rising prices and the fear of a shortage of goods, it would be expected that fair trade would be looked upon as a price protection rather than a price hindrance.

Although General Electric won its case with Macy in the Supreme Court, there was a string attached to this decision. General Electric has to police its prices which, under other conditions, could turn out to be quite a burden. Most disturbing of all is the attack in the case of Schwegmann Bros., which is expected to go to the Supreme Court around the middle of April. This case involves the validity of the non-signer clause in the Louisiana Fair Trade Law. There are similar clauses in other state laws which makes resale-price maintenance contracts equally binding on retailers who do not sign as well as on ones that have signed. This clause is the heart and intestines of the entire Fair Trade Law and an adverse decision here would be a critical defeat.

Still another case on the books is that of a mail order house in Pennsylvania which sold Sunbeam Electric Razors outside Pennsylvania below fair trade prices. The Circuit Court has ruled that the Pennsylvania Fair Trades Act is to be construed as not to apply to sales by Pennsylvania retailers to consumers in other states or to advertisement in publications published in other states. If this decision is supported by the Supreme Court, it would appear that retailers and mail order houses in any one state can sell and advertise loss leaders in other states.

All of these cases involve a great deal of worry, expense and labor by the organizations who are so enthusiastically defending fair trade. So far and particularly in state legislatures, they have been very successful and it is certainly gratifying to realize that each court decision which contains a favorable verdict is a precedent and an opinion which will serve as a very stout bulwark against a repetition of this same type of assault.

As we have said, these attacks are coming during a period when fair trade should be least liable to attack and perhaps it is a very fortunate thing that favorable decisions and precedents can be obtained from the courts and the legislatures at this particular time.

It would seem highly suggestive, however, that if an attack of this sort can be made in a period of this kind, that any period of deflation and falling consumer purchasing power, with top-heavy inventories, would result in a strain on every resource of fair trade defenders.

It is our opinion that the real and crucial test of fair trade will come when the type of retailer, such as the grocery supermarket, which is expanding into nearly every field of branded consumer goods, gets impatient with this barrier which so largely forbids it to reach its full rewards of an operating cost running between 14 and 18 per cent.

Retailers of this type who are today the last word in efficient, mechanized retail operation, who operate as we have said at an average cost of around 16 per cent, with a quick turnover and a very small markup, must some day deeply resent equalization with other retailers whose cost of doing business runs from 38 to over 40 per cent.

When sales hinge on a hinge-cover box

Continental makes hinge-cover boxes for some of the best names in the pharmaceutical field—for aspirin and antihistamines, antacid and cold tablets, medicated lozenges and laxatives. They're precision-made to flip open easily; they close to stay with an authoritative snap. Our lithographers are tops in their line, masters at decorating for sales appeal.

If it's a packaging problem – it's our baby!

CONTINENTAL CAN COMPANY

CONTINENTAL CAN BUILDING

100 East 42nd Street New York 17, N. Y.

Eastern Division: 122 E. 42nd St., New York 17 • Central Division: 135 So. La Salle St., Chicago 3 • Pacific Division: Russ Building, San Francisco 4

NEW PRODUCTS AND NEW PACKAGES

ABBOTT LABORATORIES have prepared Truozine in the form of Truozine *Dulcet* Tablets, 0.3 Gm.; Truozine Tablets, 0.5 Gm., grooved; and Truozine Suspension. Each Truozine *Dulcet* Tablet contains 0.1 Gm. of sulfadiazine, sulfamerazine and sulfamethazine, and may be chewed or crushed and given in a half teaspoonful of water. Each Truozine tablet contains 0.167 Gm. of each drug, while each teaspoonful of Truozine suspension, a mint-flavored aqueous suspension, contains 0.1 Gm. of each of the three drugs.

This preparation offers the physician the combined therapeutic effects of the three component sulfonamide drugs with greatly reduced danger of crystalluria and renal damage.

ARMSTRONG CORK CO. has placed a new dropper bottle on the market, equipped with an unbreakable polythene medicine dropper. The new plastic pipettes eliminate breakage in transit, in assembly, and in use.

The new dropper bottle, available in ¼, ½, 1, and 2 ounce sizes, has a special extra-strength white urea cap which has been combined with the original double-locking flange, oil-resistant nipple, and Armstrong's Label-Rite Bottle.

CIBA PHARMACEUTICAL PRODUCTS, INC. has just prepared Priscoline in the form of an elixir, having previously been in tablet form. This preparation has been found very useful in improving poor circulation in the extremities of geriatric patients.

HELENE CURTIS INDUSTRIES, INC. has added a 2/8 ounce tube of Creme Shampoo to the Company's line. Heretofore the shampoo has been packaged only in jars. The tubes, individually cartoned and packaged 12 in each display carton, retail for 49c each. The shampoo is now available in four sizes, a one-pound jar, $1.79; 8-ounce jar, $1.19; 4-ounce jar, 69c; and the tube.

PAUL B. ELDER CO. has prepared Phencamine, an analgesic, antipyretic, and antihistaminic as an aid in halting sneezing, coughing, running nose, and muscular aches and pains. The adult dosage is two tablets at the first sign of a cold, followed by one tablet every three to four hours for as many days.

FELLOWS MEDICAL MFG. CO. INC. has been able to prepare Chloral Hydrate in capsule form, each blue and white capsule containing 0.25 Gm. of chloral hydrate, and having no odor or taste. They are supplied in bottles of 24 and 100.

GOURIELLI'S new Moonlight Mist is the result of an enfleurage of lilacs, lilies of the valley, mimosa, and violets. The dusting powder comes in a large flat bandbox with a silver and blue cover. Both the bottles and boxes are trimmed with blue satin ribbons. Stronger than a cologne, the dau de parfum may be used liberally with a lasting effect. The two-ounce size sells for $2.50 and the four-ounce, for $3.50, while the dusting powder sells for $3.00.

LEDERLE LABORATORIES are offering Penicillin Tablets with Triple Sulfonamides, for oral use when both penicillin and sulfonamide therapy are indicated. Each tablet contains 100,000 units of crystalline potassium penicillin and 0.167 Gm. each of sulfadiazine, sulfamethazine and sulfamerazine. The tablets are packed in bottles of 100 and 1,000.

THE MAYBELLINE CO. has provided a new gold-colored metal case with a ribbed design on top, for its large size solid mascara.

THE WM. S. MERRELL CO. has re-designed the packaging of Cepacol by introducing the 6-ounce and 2-ounce and pint sizes in packages of related design. The new are by Stockton, West and Burkhart, and the bottles, by Foster-Forbes Glass Co.

JOHN HUDSON MOORE has introduced the Sportsman D-Bar solidified deodorant for men, which contains 2½ ounces of solid dedodorant in a foil wrapping and decorative glass container.

THE OCULINE CO. announces an aid for over-worked eyes in the form of Medicated Eye Pads which are saturated in a solution of medicinal ingredients. A large size jar sells for 70c.

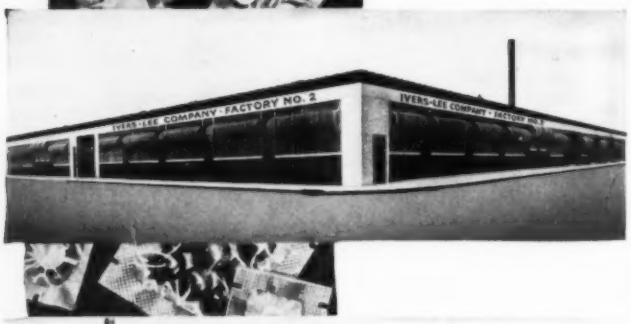
PANRAY CORP. has made Gensalate Sodium available, a highly purified form of the sodium salt of gentisic acid. It acts promptly and effectively to reduce pain, fever, swelling, and other symptoms of rheumatic disease. Unlike salicylates, the drug is almost completely non-toxic. It is supplied in uncoated tablet form (0.5 gm.) in bottles of 50, 100, 250, 500, and 1000.

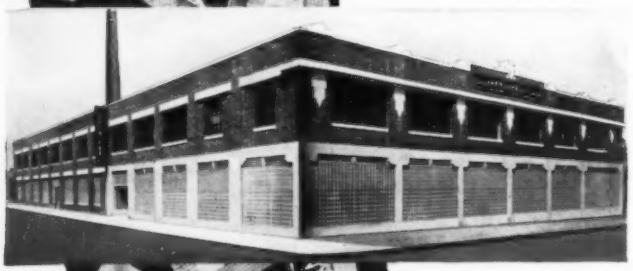
PARKE, DAVIS & CO. is offering Chloromycetin Capsules, 100 mg. for specific therapeutic effect against a wide range of bacterial, viral, and rickettsial infections. The capsules are available in bottles of 25 and 100. Chloromycetin is also available in Kap-

Since last we met in 1950-

(IL) UNIT PACKAGING SERVICE*

has added





- ✓ New high speed, automatic packaging machines which afford a productive capacity almost double that of 1949.
- ✓ An additional plant of 50,000 square feet —all on one level where materials are handled by motor skid carrier and power stackers—production on long-line automatic conveyors.
- ✓ A new annex to Factory No. 1 equipped exclusively for powder and cream packaging—increased air-conditioned areas and dust removal facilities.
- ✓ Two new types of machines for high speed production of Unit Packages with registered printing on both front and back of the package, and for Unit Packaging of delicate products of odd shape and character such as hypodermic needles.

This Is Your Packaging Department without the expenditure of one single cent for capital equipment

NATIONAL
PACKAGING EXPOSITION

April 17 - 20

you will find us at our suite in The Shelburne where we can discuss your problems privately and without interruption

IVERS UNIT (IL) PACKAGING LEE CO.
215 CENTRAL AVENUE NEWARK, NEW JERSEY

The Finest Packaging In The World—At Less Cost

*Creators of a thousand and one different types of Unit Packages for tablets, capsules, triturates, powders, creams and unusual products—thirty-one years of specialized Packaging Service.

seals, containing 250 mg., in bottles of 16 and 100; and as 50 mg. capsules in bottles of 25 and 100.

JEAN PATOU has added two colognes to its line, Cocktail Dry cologne, and Amour Amour cologne, which has just been introduced in this country. They come in two sizes, 3/5 ounces and 7 1/3 ounces in ridged crystal bottles with a flower-like black plastic top, and are boxed in white with gilt edges, bearing the Patou monogram in black. Amour Amour has has long been a favorite in Paris.

THE RHODYLL CHEMICAL CO. announces the preparation of Rhodacin Ointment and Rhodacin Solution to promote cell metabolism and speed the natural healing processes. The basic constituent is Rhodacin Chlorophyll, a new purified flesh colored derivative of the more active Chorophyll compounds, which will not stain clothing and which, when applied to the exposed surfaces of the body, is not noticeable.

Rhodacin Chlorophyll has been found a valuable aid in the post-operative care of patients, and is recommended whenever healing has been retarded and the stimulation of the regenerative processes is required.

SCHERING CORP. has introduced three new products, Prometron, Trimetose, and Gynetone injection as well as tablets. The prometron, which contains estradiol benzoate and crystalline progesterone in oil solution for intramuscular injection, is for the treatment of secondary menstrual failure of short duration due to endocrine deficiency. In most cases, uterine bleeding will occur in from three to six days after the last injection.

Trimetose contains trimeton maleate, ammonium chloride, sodium citrate, and chloroform in a palatable, cherry flavored cordial base, and is indicated for the control of coughs due to colds. The Gynetone tables and the injection form are both used for the treatment of the menopause and have the added advantage of almost completely excluding, by precise adjustment of dosage, the unwanted masuclinizing effects of the androgen or troublesome endometrial actions of the estrogen.

SHARP & DOHME INC. has announced the release of Proferrin, a rapidly effective, relatively non-toxic preparation for intravenous administration in treatment of hypochromic microcytic anemia, and Redisol Tablets, a convenient oral dosage form of vitamin B_{12}, designed for special use in stimulating the appetite.

Proferrin is a stable, sterile solution of saccharated iron oxide containing the equivalent of 20 mg. of available iron per cubic centimeter, which provides almost 100 per cent utilizable iron. Its use is characterized by a low incidence of reactions.

Redisol tablets are equivalent in activity to 25 mcg. of crystalline vitamin B_{12}, and dissolve rapidly in water, milk and fruit juice, providing a readily acceptable medicament for infants and children as well as adults.

SMITH, KLINE & FRENCH have introduced Resodec, a polycarboxylic cation exchange compound, prepared in the ammonium-potassium form, for the management of congestive heart failure. This substance has the ability to remove sodium from the contents of the intestinal tract and produces the approximate effect of cutting the patient's salt intake in half.

SOMNYL PHARMACAL CORP. OF AMERICA has introduced Nu-Pax, a new mild, non-habit-forming sedative for the relief of nervous insomnia, nervous tension and irritability. It contains Passiflores P.E., Anthemis, P. E., and Xalyl (Valeryl Diethamide), which are known to be helpful to the normal metabolic functions of the nervous system, but it does not contain any bromodies, barbiturates or opiates.

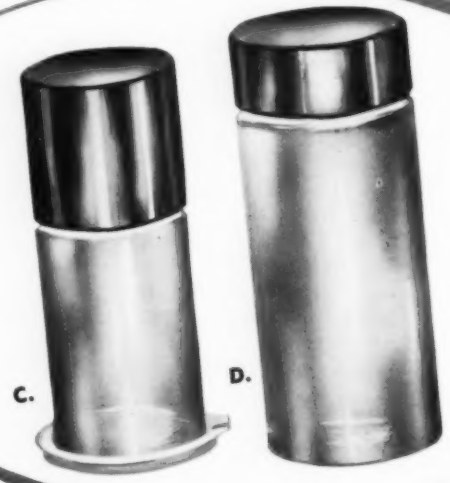
STEWART-SIMMONS, INC. has repackaged its O-Pro-Tex athlete's foot remedy in the unbreakable Plaxpak polyethylene bottle, so that it can be sprayed on infected areas or into the shoes. The squeeze bottle is also more convenient for travelling and safer in shower rooms where it might slip from wet hands.

WINTHROP-STEARNS INC. has introduced Neo-Synephrine with Penicillin, a more potent and stable product for the local treatment of sinus infection, in which the penicillin content has been tripled from 50,000 to 150,000 units. The Neo-Synephrine hydrochloride has been increased from 25 to 37.5 mg.

It is available in packages containing one bottle of stable, dried Neo-Synephrine hydrochloride with dried crystalline penicillin sodium and one bottle-containing 15 cc. of special buffered isotonic diluent.

The company announces that the new name "pHisoHex" has been approved by the Council of Pharmacy and Chemistry of the American Medical Association as the shortened form of pHisoderm with Hexachlorophene. The new 5-ounce refillable squeeze bottle dispenser restricts the ejection of the antiseptic sudsing detergent to the small amounts sufficient for scrubbing or washing. The product is also available in a pint size and in a one-gallon size.

Last year
HEADLINERS
THE STILL POPULAR
"Cologne Stick Containers"
by **RICHFORD**



Are now 1951's
JOINED BY
TOP PACKAGING ATTRACTION
"The Purse Size Cologne Stick Container"
also by **RICHFORD**

IMMEDIATELY AVAILABLE
A. B48 PLAIN (polished brass top)
B. B48 FANCY (polished brass top)
(both hold 2½ oz. net)
C. B31 (polythene snap cap) (¾ oz. net.)
D. B32 (threaded pol. brass cap) (1 oz. net)

WRITE FOR SAMPLES

RICHFORD CORPORATION
251 FOURTH AVENUE • NEW YORK, N. Y.

Need Any of These?

If you need any of the pharmaceuticals shown (listed in the coupon), or would like special ones developed, inquire of Scovill . . . suppliers to the United States Government in every emergency since 1802.

In times like these, Scovill's Drug and Cosmetic Container Division has facilities to develop and fill vital demands.

SCOVILL-MADE *Containers*

A PRODUCT OF SCOVILL

SCOVILL MANUFACTURING COMPANY
Drug and Cosmetic Container Division
63 Mill Street, Waterbury 20, Conn.

Please send full details of your design and manufacturing facilities. I am interested in:

1 & 2 ☐	Serum Clamps	7 ☐	Pill or Vitamin Carrier
3 ☐	Ether Can Cap & Nozzle	8 ☐	Lip Pomade Container
4 ☐	Band Bail Assembly	9 ☐	Nasal Inhaler
5 ☐	Dispenser	10 ☐	Ethyl Chloride Container
6 ☐	Hypodermic Plunger Rod	11 ☐	Filter Drip Cap

My problem is none of the above, but .....

Name .....
Company .....
Address .....
City ..... Zone ..... State .....

Why most a

If you do not already have one, send now for your free digest copy of the fourth "Freon" survey of the ever-growing aerosol market. It packs a wealth of information.

Mid-year meeting of C.S.M.A. —April 29, 30, May 1, 1951. If you are interested in aerosols, be sure to visit us at our suite —Drake Hotel, Chicago.

DU PONT
REG. U.S. PAT. OFF.
BETTER THINGS FOR BETTER LIVING
...THROUGH CHEMISTRY

"FREON" SAFE

t aerosols contain

"FREON" SAFE PROPELLENTS

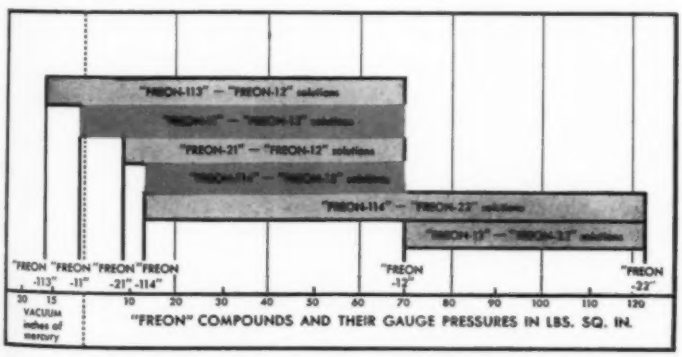
... The majority of manufacturers of pressure-packed aerosol products quickly recognized the built-in quality of "Freon" propellents. That's why today most aerosols contain these superior propellents.

First of all . . ."Freon" propellents are dependable . . . they can be relied upon to perform perfectly under all the various conditions of normal usage.

"Freon" propellents are ideal for all types of aerosol products because they are *safe*. They're nonflammable, nonexplosive, of very low order toxicity, harmless to foods, furs, fabrics and finishes. These propellents are as pure as modern scientific manufacturing methods can produce. And in addition, "Freon" propellents are good solvents for insecticides such as—DDT, methoxychlor, Lethane 384 and chlordane, as well as hydrocarbons, alcohols, esters, ethers and ketones.

There are "Freon" safe propellents suitable for *every* aerosol requirement. Solutions can be formulated to provide whatever pressure (high or low) may be indicated to effectively dispense various products by the pressure-packaged method.

Note the list of "Freon" propellents and the pressure chart below. The chart shows pressure ranges at 70°F. of several "Freon" propellent solutions.



"Freon" safe propellents

"Freon-12"—For high pressure aerosols such as insecticides, as well as for surface-coating products.

"Freon-12" and "Freon-11" solutions—Most widely used propellent.

"Freon-12" and "Freon-114" solutions—For products requiring extreme stability . . . such as cosmetics.

"Freon-22" in solution with other "Freon" propellents—For applications requiring special solubility characteristics and for pressure-boosting purposes.

"Freon-21"—For use where exceptional solubility and stability qualities are required in a neutral or acid medium.

"Freon-113"—For use with oxygen-containing products when special solvency is required.

What to do first

If you're considering pressure-packaging a product to enter the aerosol field . . . here's how to go about it:

1. Determine that there is a market for the contemplated product.
2. Develop a stable formulation, including propellent, which can be packaged in a suitable container.
3. Shelf-test the proposed finished-product package before production or sample merchandising is attempted.
4. Have a quantity packaged for test marketing. There are custom loaders who will fill quantities as low as 5000.

Also, be sure to find out how "Kinetic" Technical Service can be of real help. Write today: "Kinetic" Chemicals Division, E. I. du Pont de Nemours & Co. (Inc.), Wilmington 98, Delaware.

PROPELLENTS

KINETIC
REG. U.S. PAT. OFF.

"FREON" is Du Pont's registered trade-mark for its fluorinated hydrocarbon propellents.

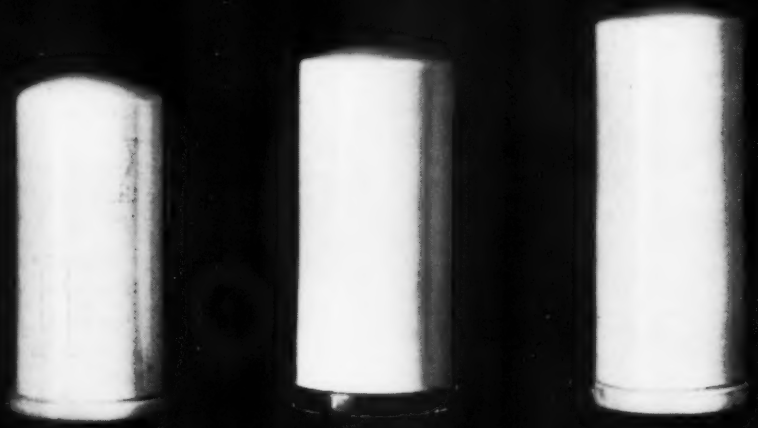
CALUMET

FIRST *for*

METAL AND PLASTIC CONTAINERS
AND SPECIALTIES

BRASS IS OUT!

AN ORDER TODAY IS YOUR CONTAINER INSURANCE



PLASTIC SWIVEL AND PUSH-UP LIPSTICK CONTAINERS
(SHOWN ACTUAL SIZE)

FREE WHEELING
SWEAT PROOF

PRECISION MADE
LOCKTITE

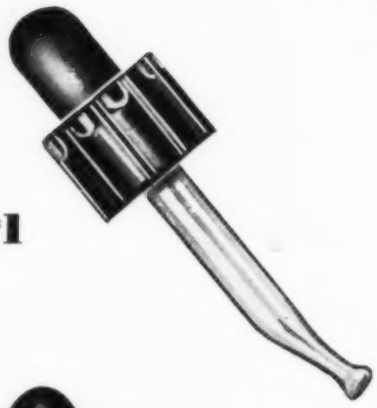
CALUMET MANUFACTURING CO., INC.

565 Fifth Avenue

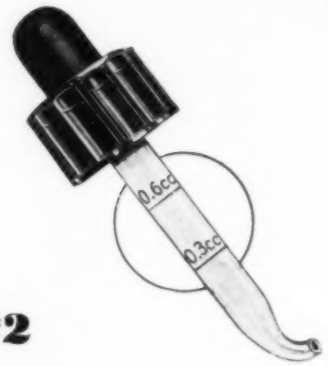
Sam Schwartzman
President.

NEW YORK (17), N.Y.
MUrray Hill 8-4270

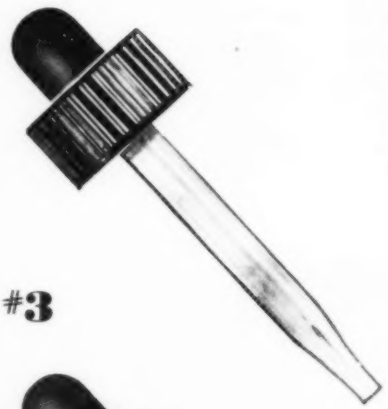
A BETTER DROPPING PART MAKES A BETTER PRODUCT



#1



#2



#3

#4

To Be SURE Your Liquid Preparation Can Be Properly Dispensed

SPECIFY

New Perfection DROPPING PARTS

Many a fine product has been rejected by the public simply because some seemingly small detail was below standard. The dropping part can be such a detail—an apparently simple device, yet vital to the user's satisfaction.

Since 1931, when Pennsylvania Glass originated the screw-cap dropping part, we have specialized in this important dispensing unit. This advantage in experience and specialization has made NEW PERFECTION Dropping Parts everything their name implies. Longer experience and undivided attention to one product have resulted in superior quality and reliable performance. To be sure of the best—specify NEW PERFECTION Dropping Parts.

We can supply various colors of bulbs in natural rubber or in our special oil-resisting Amekine compound, caps of plastic or metal in many sizes and colors, and various types of dropper glasses in any length with calibration in any color or plain. New Perfection dropping parts will fit your own bottles, or can be supplied in combination with our Modernistic bottles in Amber, Blue, Green or Clear glass. Sizes: 2cc, ⅛, ¼, ½, 1 and 2 oz.

Write for Samples and Quotations

PENNSYLVANIA GLASS PRODUCTS CO. INC.

"Glass Goods of the Better Kind"

430 N. CRAIG ST. • PITTSBURGH (13), PA., U.S.A.

You'll notice a big difference

...with A NORDA ORIGINAL

Give your products a difference, to create demand. Give them distinction, to keep your sales growing.

Use A NORDA ORIGINAL to help you create new and improved lines of toilet goods and cosmetics nobody else can make or match.

The fragrance of A NORDA ORIGINAL is alive, alluring, most modern. It has been uniquely united with a spicy, old-fashioned bouquet. There is nothing else really like it.

Test and try A NORDA ORIGINAL, the smell that will sell your products. Send today for free samples to Norda, *first ever to talk sales scents.*

NORDA MAKES GOOD SCENTS

Norda

ESSENTIAL OIL AND CHEMICAL COMPANY, INC.

601 West 26th Street, New York 1, N. Y.

CHICAGO • LOS ANGELES • ST. PAUL • MONTREAL • TORONTO • HAVANA • MEXICO CITY • LONDON • PARIS

NEWS...

Luther Heads Druggists' Supply

J. Wayne Luther, formerly general sales manager of the Mennen Co., has been appointed president and general manager of the Druggists' Supply Corp., according to W. Rutherford James, chairman. He will supervise and direct the expanded merchandising and selling activities of the organization.

J. WAYNE LUTHER

Admiral Tool Buys Eppenbach

The Admiral Tool & Die Co., Inc. has leased the entire plant of Eppenbach Inc. and has taken over the manufacture of their equipment. Officers of the new company include George Jantzen, president; Joseph Lanfear, vice-president; Edward S. Wacksman, treasurer; and Joseph Wasserman, secretary. The address remains the same, 45-10 Vernon Boulevard, Long Island City.

Neohetramine Distribution

Nepera Chemical Co., Inc., manufacturer of Neohetramine, began distributing the antihistamine for the first time exclusively to retailers through regular wholesale drug channels and directly to hospitals. During the first years of the product's introduction, while Nepera facilities were in the process of expansion, it was distributed by Wyeth, Inc. Under the reversion of sponsorship to Nepera, there is no change in the product, in its retail pricing, or in the three forms in which it is available, according to the manufacturer.

Bonham, Kelly Leave Emerson Drug

Kenneth A. Bonham, president, and John H. Kelly, executive vice-president of Emerson Drug Co., respectively, resigned from their posts early in April.

Klumpp named to Medical Board

Dr. Theodore G. Klumpp, president of Winthrop-Stearns Inc., was elected to the board of directors of the U. S. Committee of the World Medical Association at its meeting at the Hotel Commodore on March 13, according to Dr. Louis H. Bauer, secretary-treasurer. The board of directors has been increased to 40 members, which is expected to be its permanent number.

Durrett Named Med. College Dean

Dr. J. J. Durrett, medical director of the Federal Trade Commission, has been appointed dean of the Alabama Medical College at Tuscaloosa and will assume his duties some time between May 15 and June 15. He will succeed Dr. Roy Kracke, who died last summer.

A native of Tuscaloosa, Dr. Durrett has been with the FTC for about ten years. He had previously been with the Food and Drug Administration since 1928, except for a period between 1931 and 1936 when he was associated with one of the large pharmaceutical manufacturers in New York.

Dr. Volwiler Receives Citation

Dr. Ernest H. Volwiler, president of Abbott Laboratories, received a citation for distinguished public service from the Association on American Indian Affairs when an exhibition of 30 documentary paintings illustrating Indian health and medical needs opened in New York on March 6. The presentation of a scroll carrying the citation was made to Dr. Volwiler by Maria Tallchief, descendant of the Osage Tribe.

Abbott commissioned four prominent American artists in 1949 to make a survey of the Indians' plight. They were accompanied on a 20,000-mile trip by R. Blayne McCurry, assistant manager of advertising and public relations for Abbott, who wrote a series of articles on the trip for *What's New*.

Piel Joins Evans Research

Elmar V. Piel has been made a project group leader at Evans Research and Development Corp. He had formerly been employed in the technical sales department of the Barrett division, Allied Chemical and Dye Corp. and as chemist with Hercules Powder Co. and Shell Development Co.

Appointed by Walker Vitamin

Robert H. Mooney formerly district sales manager for Parke, Davis & Co., has been appointed vice-president and sales co-ordinator of Walker Vitamin Products, Inc.

ROBERT H. MOONEY

Chiris Old Timers

At an old timers meeting, in which reminiscence, good fellowship and good cheer were skillfully blended by a bunch of blending experts, former employees of Antoine Chiris met at Jean Boyles, New Jersey, for their first reunion and a banquet.

The occasion for this sentimental gathering was derived from the energy of two real old timers, Wm. (Pa) Dunney, Chiris, 1901, and Charlie Swan, Chiris, 1898, who felt that after an interval of forty or fifty years it was time to gather the clan, renew old memories and friendships and have a little judicious celebration.

Pa Dunney, with his usual command of the situation, held the chair and in an informal talk recalled some of the early days in the Chiris factory, at Delawanna, New Jersey. He was succeeded by B. T. Bush, first president of Chiris in this country, during whose administration the modern factory was built and many new products were first produced for the American Market. Charlie Swan, still as peppy and young looking as when he succeeded to Chiris management over twenty-five years ago, followed and was followed in turn by F. E. Shoninger, President of Antoine Chiris in this country, managing

John A. Ewald, right, president of Avon Products, Inc., presenting Roy G. Jones with Tiffany Mantle Clock at dinner in honor of his fifty years' service with the company.

director of Antoine Chiris, London, and director of the parent company in France, who extended greetings to the gathering and announced that Marius Martin, with Chiris for over thirty years and among those present, had just been made vice-president in charge of production.

Other speakers included Wally Bush, John Beach and Ed Bush, who at kneepants age dug the first spade full of earth for the modern factory. A tablet, signed by each of the thirty-six present, was given to Mr. Shoninger to forward to Mr. Leon Chiris in France.

At eleven o'clock, when this reporter left, there was no diminution of the conversational hum or in movements of the left forearm. Unquestionably—a good party.

Dermetics Opens Canadian Branch

Dermetics, Ltd. has been appointed distributor for Canada of the hydronized beauty oils of Dermetics Inc., according to G. D. Runnels, president. Headquarters of the Canadian branch will be in Victoria, B. C. H. R. Lumby, sales manager for the Canadian venture, plans selective distribution through department stores and exclusive salons.

Tintair Appointments

Nat Kalech, formerly western regional sales manager, has been appointed general sales manager for Tintair, according to Martin L. Strauss II, president and chairman of the board of Bymart, Inc. Additional appointments include James F. Call and Morton M. Foster who have been appointed district sales representatives.

Ayerst Transfers Cook to N.Y.

Dr. A. Stanley Cook, vice-president of Ayerst, McKenna & Harrison, Ltd., Canada, has been transferred to the New York offices of the firm, according to W. Boyd O'Connor, president. He will continue to coordinate the scientific and technical aspects of the business for both U. S. and canadian divisions.

DR. A. STANLEY COOK

Lynch with Prentiss Drug

David W. Lynch, formerly with Velsicol Corp. and also John Powell & Co., has joined the Chicago branch of the Prentiss Drug & Chemical Co. as mid-west sales manager, according to A. W. Bevernick, vice-president.

Pharma. Prods. Changes Name

Pharmaceutical Products Corp. has changed its named to Natick Pharmacal Laboratories, a division of Natick Industries Corp. The company has moved to a new location at 780 Worcester St., Natick, Mass.

Jones Honored by Avon

Roy G. Jones completed 50 years of unbroken service with Avon Products, Inc. in February and was honored with a dinner at the Eureka Hotel, Suffern, N.Y., the home of Avon. Fifty company executives and fellow employees attended the dinner in his honor. Mr. Jones has handled important work in the essential oils division of the company.

During the celebration, John A. Ewald, president of Avon, presented Mr. Jones with a Tiffany Mantle Clock in appreciation of his 50-year association with the firm.

Walker Elected by Columbia Univ.

Myron Walker, president of Walker Vitamin Products, Inc., was elected first vice-president and chairman of the board of the Columbia University, College of Pharmacy at the March 20 meeting of the University board of trustees.

Ellis with Parkinson

Edgar R. Ellis, with Firmenich & Co. since 1938, has become vice-president of Parkinson Perfumes, Inc., in which position he joins George R. Parkinson, who has been directing head of the company for the past ten years.

EDGAR R. ELLIS

Named Innis, Speiden Treasurer

George S. Hamilton, vice-president and comptroller of Innis, Speiden & Co., has been elected to the additional office of treasurer, according to William H. Sheffield, Jr., president. He takes over the duties of treasurer succeeding Charles C. Wickstead who has retired after 46 years of service and who will continue as director as well as in an advisory capacity.

Pinckney L. Frost, manager of sales, will now handle his present position as well as that of import manager, which was vacated by Mr. Hamilton.

Dressed with an Empress closure and a smart label combination, stock bottle A-7179 is a sales winner.

SPRUCE-UP with no mark-up

Give your product a helping hand at the point of sale by styling your package to attract customer attention. You can do it, and still keep within commercial limits on container costs.

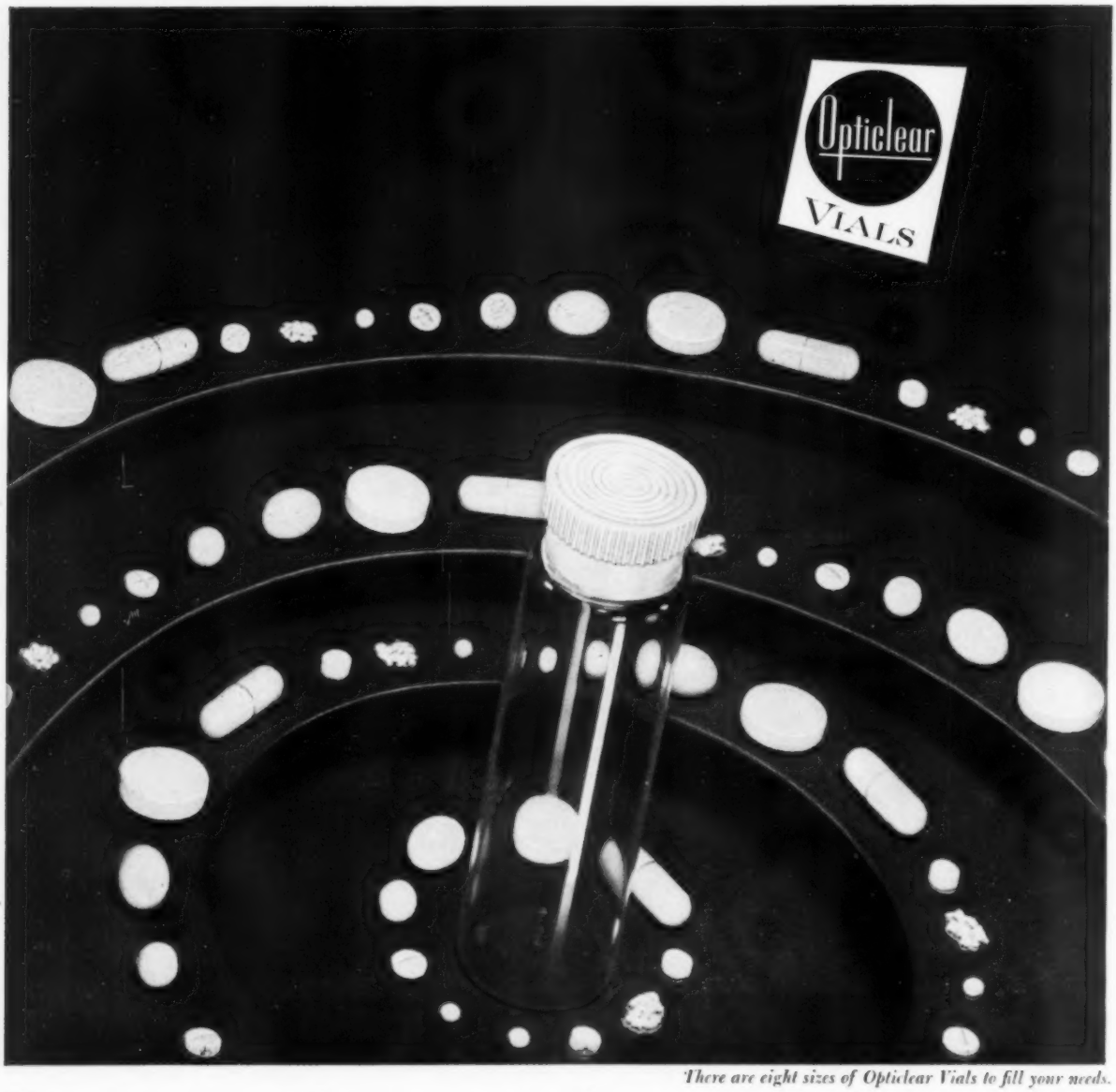
Owens-Illinois has more than 1400 different sizes and styles of stock-mold Duraglas bottles from which to choose. And you'd never guess they're stock items once we add a smart closure in the right color and set them off with eye-stopping labels.

No matter what the market conditions may be, it doesn't pay to let your package get out of the *habit* of selling.

Duraglas bottles are protectors of quality

TRADE MARK REG. U.S. PAT. OFF.

OWENS-ILLINOIS GLASS COMPANY • TOLEDO 1, OHIO • BRANCHES IN PRINCIPAL CITIES



There are eight sizes of Opticlear Vials to fill your needs.

For your product—a package of distinction

KIMBLE OPTICLEAR VIALS

YOUR PRODUCT certainly merits this quality container. It is lustrous, crystal-clear glass in a design of simple dignity—a distinctive package which bespeaks quality for the product it contains.

What's more, this handsome vial provides unusual protection. Its new, resilient plastic stopper seals with a positive moisture-proof seal. It keeps products safe and dry. Yet it is easy to open—easy to close. And even continued re-use does not impair its sealing effectiveness.

Wouldn't you like to examine these vials of distinction? Tell us the sizes your product requires and we'll send samples.

KIMBLE GLASS TOLEDO 1, OHIO

Division of Owens-Illinois Glass Company

Pharm. Contact Committee Meeting

Representatives of the Food and Drug Administration, U. S. P. Revision Committee, and National Formulary Committee on Revision attended the 57th meeting of the Combined Pharmaceutical Contact Committee, which was held at the Washington Hotel, Washington on March 15 and 16. The contact committee represents the American Drug Manufacturers Association and the American Pharmaceutical Manufacturers' Association. Dr. F. O. Taylor served as chairman.

Among the technical reports delivered at the meeting were those covering the problem of "multiple dose containers" for injections, the microbiological assay of liver preparations for injection using Vitamin B_{12} as a comparison standard, and sampling procedures for raw materials. The report on sampling procedures was the culimination of five years' work by a committee under the direction of Dr. E. G. E. Shafer as chairman, and was accepted for transmission to the executive committee of the respective associations for final consideration for release to the industry.

John Beach, Inc. Established

John Beach, Inc., a new firm manufacturing concentrated oils, flavors, and emulsions, has been formed at 5925 South Hoover St., Los Angeles 44. John J. Beach is president of the company and John H. Beach, vice-president. The president has been manufacturing and selling extracts and aromatic chemicals in Los Angeles since 1946. John H. Beach was with Fritzsche Brothers, Inc., from 1908 to 1920, Antoine Chiris Co. from 1920 to 1924, and with Seeley & Co. from 1924 to 1947.

Warner-Hudnut Stock Registration

Warner-Hudnut, Inc. filed a registration with the Securities and Exchange Commission for 320,000 shares of common stock of $1 par value. Of the total shares involved in the registration, 185,000 are to be sold by Warner-Hudnut and 135,000 by Gustavus A. Pfeiffer, a "selling stockholder". F. Eberstadt & Co., Inc. is named as the principal underwriter.

Proceeds to the company of its sale of the 185,000 shares, together with other company funds to the extent necessary, are to be applied to the repayment of $3,400,000 of borrowings from the Irving Trust Co., totaling $5,400,000.

JACK R. KAESTNER

MELVIN R. ANDER

MM&R Enlarges Sales Staff

Melvin R. Ander, Jack R. Kaestner, and James J. McDowell have been added to the sales staff of Magnus, Mabee & Reynard, Inc., and Zane McCarty and Walter P. Spry have been assigned to new territories, as a result of the expansion plan announced by Percy C. Magnus, president, at the recent sales conference held in New York. Mr. Ander and Mr. Kaestner have been assigned to the midwestern area sales division with headquarters in Chicago, while Mr. McDowell has been assigned to New York, under M. Stanley Barker. Mr. McCarty, formerly of the Chicago offices, has been assigned to the southwestern sales force headed by Miller S. Burgin and Mr. Spry, with headquarters in Rochester, N. Y. will continue to cover the northern part of New York in addition to northwestern Pennsylvania.

JAMES J. McDOWELL

Ketner Appointed by Lever

David C. Ketner has been appointed vice-president in charge of advertising for the Pepsodent division of Lever Brothers Co., according to Charles T. Lipscomb, Jr., president. Formerly brand advertising manager for several Lever products, Mr. Ketner succeeds John V. Sandberg who has resigned.

The Hon. Martin J. Kennelly, Mayor of Chicago (left) receiving a Special Honorary Membership in Chicago Drug & Chemical Association from President Ralph A. Olson, Chicago manager of S. B. Penick & Co. Mayor Kennelly was guest speaker at luncheon.

Serving Industry through Finer Chemicals!

Heyden has long been known as a primary manufacturer and bulk supplier of high quality intermediates and aromatic chemicals. Many of these are used in the production of perfume compounds, sanitary chemicals, soaps and deodorizers. Others serve as preservatives and anti-oxidants essential to stabilization of fine cosmetics, toiletries and related products.

Write for samples and further information.

FINE HEYDEN CHEMICALS

HEYDEN CHEMICAL CORPORATION • 393 Seventh Ave., New York 1, N.Y.

CHICAGO • PHILADELPHIA • SAN FRANCISCO • DETROIT • PROVIDENCE

Benzaldehyde • Benzoates • Benzyl Chloride • Bromides • Chlorinated Aromatics • Creosotes • Formaldehyde • Gallic Acid • Glycerophosphates • Guaiacols • Hexamethylenetetramine • Medicinal Colloids • Methylene Salicylic Acid • Paraformaldehyde • Parahydroxybenzoates • Penicillin • Pentaerythritols • Propyl Gallate • Resorcinol • Salicylates • Salicylic Acid • Streptomycin

HEYDEN Chemicals

FELIX BAUSO

RALSTON W. RUSSELL

Hartford-Empire Changes Name

Hartford-Empire Co., of which Plax Corp. is a wholly owned subsidiary, has changed its name to Emhart Mfg. Co. The manufacture of glass-making machinery, with which the firm has been identified since 1912, will be carried on under the name, Hartford-Empire division of Emhart. The name change was approved by stockholders at the management's suggestion that a new company title was required to reflect the company's expanded and diversified operations.

Fleet Memorial Laboratory

The C. B. Fleet Co. has subscribed $18,000 to establish the proposed Fleet Memorial Laboratory as a part of the new Lynchburg General Hospital in Lynchurg, Va. The laboratory will stand as a memorial to the late Charles Browne Fleet who, starting as a Main Street druggist, developed Phospho-Soda, later achieving national and international distribution. Herbert B. Thomson, chairman of the memorial gifts committee of the $1,750,000 building fund campaign now in progress, declared that the memorial is a "splendid gift and a most appropriate tribute to Mr. Fleet."

CSC Pharms. Enlarges Sales Staff

John R. Biederman, formerly assistant manager, has been appointed assistant director of Commercial Solvents Corp. Pharmaceuticals, a division of Commercial Solvents Corp. Thomas R. Callery has been named executive assistant as a result of the expansion of the company necessitated by an increased volume of business in antibiotics and other ethical products. In order to integrate the sales activities of the division and to aid in the training of field personnel, regional pharmaceutical managers have been established, including Felix Bauso, who has become eastern regional manager with headquarters in New York, and Ralston W. Russell, who has been named central regional manager with headquarters in St. Louis.

Fries & Fries Move to L.I.

Fries & Fries Inc. have moved their eastern offices and laboratories to 142 South Long Beach Road, Rockville Centre, N. Y. The new location offers larger quarters for their expanded research and development program. The telephone numbers are Rockville Centre 6-8282 and 8283.

Schering Conference

Schering Corp. held a week-long conference of all International division managers and domestic field managers and supervisors in the home offices of the company and at the Hotel Suburban, East Orange, N. J. Francis C. Brown, president outlined overall sales policies and research objectives at general sessions, while Dr. John N. McDonnell, vice-president, discussed plans for extending the scope of Schering operations in both hemispheres during the coming year.

Bill Mennen, Jr., left, vice-president, Mennen Co., presenting Mennen Award to Jack Davis, Davis Bros., Inc., for the "Greatest Sales Accomplishment in 1950."

JOHN R. BIEDERMAN

THOMAS R. CALLERY

Health Foundation on Radio

The Health Information Foundation arranged with the Columbia Broadcasting System a series of five radio interviews with national authorities in the health field, aimed at providing guidance to laymen during the present emergency. The series, entitled "You and Health in the Present Emergency," was presented by Dwight Cooke over CBS stations each night during the week of April 9.

Admiral William H. P. Blandy, president of the Foundation, discussed the country's health resources which are available to the average citizen during the present international crisis.

Fire in Whittaker Plant

A fire on March 2, at the South Kearney, N. J. plant of Whittaker, Clark & Daniels destroyed the company's sample room with a loss of product samples, data books, and stock of talc and metallic soap catalogues. Reprints of the catalogues are being made, while the sample room is under construction and will be restocked. Requests for samples and literature may be delayed, but the company reports that all inquiries will be filled as quickly and completely as possible.

Natural and Aromatic Materials ...

Bases and Specialties for PERFUMES, COSMETICS and SOAPS

Special Representatives for Tombarel Freres, Grasse

☆ **Absolute Supreme Flower Essences**

☆ **Surfine Essential Oils**

☆ **Resinoids**

Tombarel

PRODUCTS CORPORATION

12 EAST 22ND STREET, NEW YORK 10

Member of The Fragrance Foundation, Inc.

FERNAND R. TOURTOIS

Tourtois Named Research Director

Fernand R. Tourtois, special assistant to Philip Corney, president of Coty, Inc., has been appointed director of research and development. He will also be chairman of the research committee.

Receive Monsanto Awards

Dr. William S. Knowles, of the organic chemicals division of Monsanto Chemical Co., and John W. Cross, of the company's Merrimac division, have been granted leaves of absence at full salary for an academic year of study at universities of their choice. Monsanto has granted 21 awards up to this time, designed to encourage the scientific work and further development of the company's technical personnel in physics, chemistry and chemical engineering. The leaves are awarded on the basis of especially meritorious service and outstanding performance.

Abbott Labs. Honor Six Employees

E. B. Carter, executive director of research, and Dr. Robert D. Coghill, director of research, Abbott Laboratories, presented six employees with special awards for outstanding research work at the annual dinner of the research, development and control departments on March 15. Those who received the awards were: Dr. G. M. Everett, research pharmacologist; Dr. K. E. Hamlin, group leader in organic research; Dr. F. C. McIntire, research chemist in biochemistry; Dr. J. R. Schenck, antibiotics research chemist; Otto F. Walasek, development chemical engineer; and Dr. H. E. Zaugg, group leader in organic research.

Talks were given by Dr. E. H. Volwiler, president; George R. Cain, executive vice-president; and Dr. George R. Hazel, director of clinical research.

Elected Robins Gen. Sales Mgr.

E. F. Heffner, Jr., general sales manager of the A. H. Robins Co., Inc. since 1942, was elected vice-president in charge of sales at the annual meeting of the board of directors early last month.

Riedweg Visits U. S.

Jacques Riedweg, Givaudan & Cie., Paris, who has been associated with French perfumery circles for over 35 years, spent the greater part of last month visiting the United States.

JACQUES RIEDWEG

de Hoyos Re-elected Mayor

Luis de Hoyos, vice-president of Synfleur Scientific Laboratories has been re-elected Mayor of Monticello, N. Y. for the eighth time. He is also New York State Mayors Reception Chairman for Distinguished Latin American Guests and Technical Adviser of the Inter-American Congress of Municipalities.

NORMAN F. STORM

Storm Serving on N.P.A.

Norman F. Storm has been granted an indefinite leave of absence from his post of executive vice-president of Ciba Pharmaceutical Products, Inc. while he serves as head of the Drug and Cosmetic Section of the Cosmetic division of the National Production Authority for the duration of the national emergency.

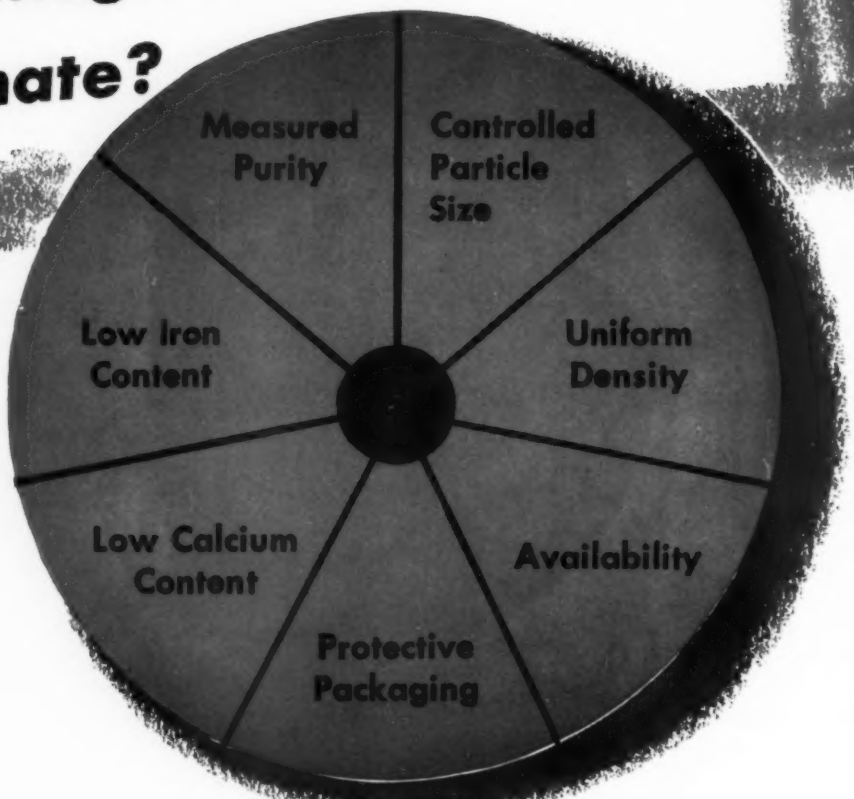
Mr. Storm will be responsible for coordinating the requirements in materials of the drug and cosmetic industries and arranging for the allocations that will be made by the National Production Authority. He will be associated with Dr. Joseph S. Bates, former president of Ciba, who is now serving as director of the chemical division of the National Production Authority.

New Wyeth Warehouse

A one-story warehouse will soon be constructed for the Memphis branch of Wyeth, Inc. and will contain sales and accounting offices. It will serve western Tennessee, Arkansas, Alabama, Louisana, Mississippi, and Missouri.

Employee winners of Abbott special awards for outstanding research work. Left to Right: Otto Walasek, Dr. Floyd C. McIntire, Dr. K. E. Hamlin, Dr. H. E. Zaugg and Dr. Guy M. Everett. Dr. J. R. Schenck, was also a winner, vacationing at time of presentation.

What qualities do you want in your Magnesium Oxide and Carbonate?



How many of these qualities are vitally important to you? You get all seven—when you buy Baker's Magnesium Oxide and Carbonate.

If you react Magnesium Oxide or Magnesium Carbonate chemically, or if your final product must meet predetermined specifications, you will be interested in Baker's measured purity typified by the low iron and calcium content of these two fine chemicals.

If you formulate either of these compounds into dry or wet mixtures, the controlled particle size and density will enable you to achieve a uniform final product. This helps to simplify both your manufacturing and packaging problems.

Baker's protective packaging assures you that these chemicals will arrive at your point of use in good condition. Long experience in cooperating with users of Baker's Magnesium Oxide and Carbonate indicates that all seven of Baker's features are both important and essential.

So write for free testing samples and make your comparison. We will gladly quote prices. Address: J. T. Baker Chemical Co., *Executive Offices,* Phillipsburg, New Jersey.

Baker CHEMICAL

Baker Chemicals

REAGENT · FINE · INDUSTRIAL

Flint, Eaton New Western Div.

Flint, Eaton & Co. recently began operation of a western division with headquarters at 112 Pomona Ave., Brea, Calif. The division, according to H. K. Flint, vice-president and director of sales, will include a sales office and shipping warehouse, and will serve the states of California, Washington, Oregon, Idaho, Nevada, Arizona and Utah. Gerald Pitcher, who has been with the company for several years, is in charge of the new division.

Camilli to Visit U.S.

Francois Camilli, president and general director of Camilli, Albert & Laloue, will arrive in the United States on May 10 on the Liberte for an extended trip through this country.

FRANCOIS CAMILLI

Bristol Appointments

Dr. Lee C. Cheney has been named director of organic chemical research of Bristol Laboratories Inc. and Dr. Irving R. Hooper has been appointed director of biochemical research, according to Dr. Amel R. Menotti, vice-president and director of research.

Sharp Named Merck Financial V.P.

James H. Sharp has been elected financial vice-president of Merck & Co., Inc., according to George W. Merck, chairman of the board. He has been vice-president and director of Grace National Bank of New York, and will retain the directorship. Mr. Sharp is also a director of Merck and of Merck's export subsidiary, Merck (North America) Inc.

Added to Dermetics Sales Staff

Bob Shenkman and Bob Gunther have been added to the Dermetics sales staff according to J. W. Hanlon, sales manager, Dermetics, Inc. Mr. Shenkman will handle the New England territory, and Mr. Gunther, the metropolitan New York area.

Kremers-Urban Conference

Kremers-Urban Co., Milwaukee, held its annual leadership group conference and district managers' meeting in early February at the Milwaukee Athletic Club. Members of the home office staff, district managers, and the firm's outstanding salesmen attended this event and discussed products and sales problems.

Once a year a leadership group is named from the five leading salesmen of the previous year. These men then meet with the district managers and company executives for a complete examination of company policy. Among the many subjects covered at this year's meeting were product improvement and suggestions for new products, sales equipment and literature, organizing and planning of territories, advertising, and individual work requirements.

Paul Klemtner, president of Paul Klemtner & Co., Inc., addressed the group on "Building A Prescription Business".

Zerbe Editor of A.Ph.A. Journal

Bernard Zerbe, vice-president of Murray Breese Associates, and former managing editor of *American Druggist*, has been named executive editor of the Practical Pharmacy Edition of the Journal of the American Pharmaceutical Association, according to Dr. R. P. Fischelis, secretary and general manager of the Association. He will supervise both the editorial and advertising departments of the magazine.

Armour Building Blood Plant

Armour and Co. is building an $850,000 blood-processing plant at Forth Worth, Texas for the Army under an Army contract. The plant is expected to handle up to 15,000 pints of blood a month in its dried human blood plasma program. It is the only plant of its kind in the southwest, although the Army has set up similar ones under private operation in other parts of the country.

Promoted by Fruit Growers Exchange

Donald R. Thompson was appointed manager of the products department California Fruit Growers Exchange, at an executive committee meeting of the board of directors of the producing companies in early March. He succeeds Milton L. Chapman who recently resigned from that position, having been manager since 1944. Mr. Thompson has been with the Exchange since 1927.

Appointed by Hirestra

S. G. Gausman has been appointed representative of Hirestra Labs., Inc. in part of California, Oregon, Washington and adjacent states. Having spent over 20 years in the toiletries business on the Pacific Coast, Mr. Gausman has returned to the cosmetic industry following an absence of two years.

McCue with Shulton

Raymond G. McCue, formerly with Albert Verley Co., has joined Shulton, Inc. to handle sales of a new fine-chemicals division at the firm's Clifton, N. J. plant. This new division has been formed for the manufacture and distribution of Vanitrope, a new raw material for the flavor industry, along with other flavor and aroma fine chemicals.

RAYMOND G. McCUE

Cosmetics Lab. in Greece Desired

D. Ludaros Yeorgandas of 28, Aristidou St., Piraeus Greece, is interested in establishing a laboratory in Greece for the manufacture of modern brand name cosmetics on a royalty basis.

Klemme with Central Pharm.

Dr. Carl J. Klemme, formerly of Burroughs Wellcome & Co., Jamieson Pharmacal Co., and Nyal Co., respectively, has joined the Central Pharmacal Co. as director of research and product development.

McKesson Purchases Land

McKesson & Robbins, Inc. has purchased land in Forest Hills, L.I. as the future location of a new warehouse and office building to replace its present Brooklyn wholesale drug division at 464 Liberty Ave.

Construction of the new building will depend upon the availability of necessary building materials. The new warehouse will serve retail druggists in Kings, Queens, Nassau, and Suffolk counties.

Attending February meeting of Chicago Chapter of Society of Cosmetic Chemists (left to right) are Maison G. deNavarre, publications chairman of Society; Dr. Cleveland J. White, chairman and professor of dermatology at Loyola University; Herman White, Society program chairman; Dr. Austin Smith, editor of A.M.A. Journal; and Eugene Rose, chairman of society's Chicago chapter. Dr. White spoke on Allergic Dermatosis.

Martin Named V.P. Antoine Chiris

Marius J. Martin was elected vice-president in charge of production of Antoine Chiris Co., Inc. by the board of directors, in honor of his thirty-five years with the company.

Ciba States, Ltd. Rents Floor

Ciba States, Ltd., of 350 Fifth Ave., New York, holding the American interests of Ciba Ltd., of Basle, Switzerland, has leased the nineteenth floor of an office building under construction at 260 Madison Ave. The lease is for ten years.

Named to Personal Products Board

E. W. Jochim, general manager of Chicago operations of Personal Products Corp., was elected to the board of directors in March, according to George H. Murphy, president.

Dauphine with Hooker

Dr. Thonet C. Dauphine has been appointed manager of sales development of Hooker Electrochemical Co., according to R. W. Hooker, vice-president in charge of sales.

Dr. A. L. Cantelmo, Recently Appointed Medical Director of Maltbie Laboratories, Inc.

With Evans Research

Hilde R. Weil and Frank E. Ellison have joined the staff of Evans Research and Development Corp. as research assistants.

Barry with Maltbie Labs.

Richard H. Barry has been appointed technical director of Maltbie Laboratories, Inc. He was formerly research chemist for the Vick Chemical Co. and, until his present appointment, served as director of research for the Central Pharmacal Co.

RICHARD H. BARRY

Wampole Appointments

George F. Hoffnagle has joined Henry K. Wampole & Co., Inc. as head of the pharmaceutical development division and George E. Byers has been appointed assistant production director.

Cincinnati Drug & Chem. Meeting

Professor D. A. Wells, acting head of the Physics Department of the University of Cincinnati, talked on "Atomic Energy" at the Cincinnati Drug and Chemical Association dinner meeting on April 6.

Chicago Cosmetic Chemists Meet

Dr. Cleveland J. White, chairman and professor of Dermatology at Loyola University, addressed the Chicago Chapter of the Society of Cosmetic Chemists during their February meeting on the subject, "What the Cosmetic Chemist Should Know about Allergic Dermatosis". Dr. Austin Smith, editor of the Journal of the American Medical Association, and honorary member of the Cosmetic Chemists, attended this meeting, his first one.

Named Director of CSMA

H. W. Hamilton has been appointed managing director of the Chemical Specialties Manufacturers Association, and will assume the position on September 1. At that time he plans to sever his connection with the H. W. Hamilton Co. of which he is president. Prior to founding the Hamilton Co. three years ago, Mr. Hamilton had been associated with the White Tar division of the Koppers Co.

Grongoire Cosmetic Co. Moves

Grongoire Cosmetic Co. is now located in much larger quarters at 127 Green St., Brooklyn, with complete facilities for private label manufacturing. All private label formulation is under the direct supervision of Sid Dunn.

Stokes Increases Output

The F. J. Stokes Machine Co. reports an increase of about 80 per cent in the number of personnel engaged and an increase of more than 100 per cent in man-hours, as compared with six months ago, according to Joseph E. Feltis, personnel manager. The plant is running on two 9-hour shifts daily with a half day on Saturday in place of the conventional 8-hour day and 40-hour week previously in effect.

Ball Bros. Buys Container & Closure

Ball Bros. Co. has purchased Container & Closure Sales, Inc., according to Philip W. Hatch, sales manager for commercial products division. S. R. Bowman of St. Louis will manage the newly acquired commercial glass container sales offices.

Moncur Re-elected Ingram Pres.

Hugh D. Moncur, Jr. has been re-elected president of Ingram Laboratoreis, Inc. Additional appointments include M. V. Conti, vice-president, chief chemist; K. P. Outland, vice-president, sales division; and Ed. J. Schram, comptroller and treasurer.

Faithfully recreates the fragrance of
the living flower—a substitute for the Absolute at a savings
Rosam
ROSE DE MAI SYNTHETIC
by Albert Verley & Company, Inc.

Albert Verley & Company's

Rosam

. . . a worthy substitute for the costly natural Absolute

Rosam is a remarkable achievement in synthesis. It has won a permanent place for itself in all forms of perfumery as a complete substitute for Absolute Rose de Mai. You can use it in your most significant formulas — alone or in combination with the natural product, without excessive cost burden — and with confidence that results are a credit to your perfumes and your prestige. Its price is just $25.00 a pound — especially noteworthy now, in view of the continuing high cost of Rose Absolutes, particularly Bulgarian Otto of Rose.

We suggest that you experiment with Rosam. Appraise its possibilities in your present compounds, or the new one you are now creating. Write today for working sample.

ALBERT VERLEY AND CO., INC.
472 W. Superior St., Chicago 10, Ill.
114-116 E. 25th St., New York 10, N. Y.

MEFFORD CHEMICAL CO.
1026 Santa Fe Ave., Los Angeles 21, Calif.

ALBERT VERLEY AND CO., INC.
222 Front St., East, Toronto, Ontario

Representatives in all principal cities throughout the world.

Where Your Dollars Have More Scents

Albert Verley

AND COMPANY, Inc.

Headquarters for Odor Appeal

Synthetic Aromatic Products and Organic Isolates • Synthetic Flower Oils and Aromatic Bases • Bouquets and Finished Compositions.

Steinke Represents Maritza

Ben Steinke, formerly of Bourjois, has been appointed sales representative for the Countess Maritza Cosmetic Co., according to Randolph Leube, general sales manager. He will work in the areas of Minnesota, Wisconsin, North and South Dakota, Montana, and northern Michigan.

Geigy Moves to Larger Quarters

Geigy Pharmaceuticals, division of Geigy Co., Inc., moved to larger quarters early this month at 220 Church St., according to Ernst Hammer, director.

Wittenberg Appointed by Baker

Robert B. Wittenberg has been appointed sales manager of the Industrial Chemical division of the J. T. Baker Chemical Company.

Ruddy with Chilcott Labs.

A. Wayne Ruddy has joined the research staff of Chilcott Laboratories as director of organic chemical research. He had formerly been associated with Sterling-Winthrop Research Institute.

Appointed by Handleman Drug

Thelma Duncan has been appointed cosmetic buyer for the Handleman Drug Co., Detroit. She will be responsible for buying the cosmetics, as well as their sales and merchandising.

Joins Winthrop-Stearns

Dr. May Sherman has joined the medical staff of Winthrop-Stearns Inc., according to Dr. E. J. Foley, medical director.

Brennan with Abbott Labs.

John J. Brennan has joined the chemical sales division of Abbott Laboratories as a sales representative.

Named to Pharm. Foundation

Dr. W. Paul Briggs was released from the U. S. Navy to accept the position of executive secretary of the American Foundation for Pharmaceutical Education on April 2. He replaced Dr. Ernest Little, who had been Acting Secretary since September, 1950.

Blanchard—Donohue

Donald A. Blanchard, Schimmel & Co., Inc., and Joan Kathleen Donohue of Hewlett, L.I., were married earlier this year. Mr. Blanchard is a junior sales executive and active in both selling and sales promotion.

Appointed by Sharp & Dohme

Dr. Richard T. Smith has been appointed staff physician in the medical division of Sharp & Dohme, Inc., according to Dr. W. P. Boger, acting medical director.

R. Brooks Brown

R. Brooks Brown, consultant to the Louisville sales office of Anchor Hocking Glass Corp., died February 21. He pioneered the packaging of many food products in glass and was the first to introduce and promote vacuum packing in glass in the South. Mr. Brown became associated with Anchor Hocking Glass Corp. in 1905, through his operations with Sure-Seal Co., Inc.

Mr. Brown turned over the active management of the Louisville sales office to his son, R. Brooks Brown, Jr., while he became consultant. He is survived by his wife and five sons, two of them with Anchor Hocking, Brooks, Jr. and Maxwell, at Atlanta.

R. BROOKS BROWN

Harry B. Grubb

Harry B. Grubb, sales representative of the Oxzyn Co. for over 25 years, died March 19. He had been seriously ill since December. Before his association with Oxzyn he had been employed by Bourjois, Inc. for several years, and had been a member of the BIMS since its formation. Surviving Mr. Grubb are his wife, Mrs. Celie Grubb; two daughters, Nancy and Susan; and a son, Alexander.

Peter Menke

Peter Menke, traffic manager for George Luebers & Co., and one of the oldest employees of the firm, died March 14 at his home in Elmhurst, N. Y. He entered the business in 1904.

Thomas D. Nolan

Thomas D. Nolan, division sales manager for Bymart, Inc., was stricken with a cerebral hemorrhage at his office, 677 Fifth Ave., on March 5, and died a few hours later at the Medical Arts Hospital. Before joining the Tintair organization last year Mr. Nolan had previously been associated with Houbigant, Schiaparelli, Helena Rubinstein and Dana Perfumes. He is survived by his wife, a son, three brothers, and three sisters.

Edward W. Ravenscroft

Edward W. Ravenscroft, chairman emeritus of Abbott Laboratories, Inc., died March 24 in Phoenix, Ariz., of a heart ailment. He was 79 years old. His son, Edward Abbott Ravenscroft, is director of engineering at the laboratories, and resides in Glencoe, Scotland.

Leopold P. Schonwald

Leopold P. Schonwald, 61, Verodor Essential Oils & Cosmetics Co., died recently following a prolonged sickness and operation. He came to America in 1938 from Budapest to establish the former Hungarian firm in this country. Until his death he conducted the business in New York together with his wife, who now continues as head of the firm.

Martin F. Schultes

Martin F. Schultes, vice-president of the Hewitt Soap Co., Inc., a subsidiary of the Procter & Gamble Co., died March 6 in Naples, Fla. while on vacation. He was 64 years old. In addition to his many years with the Hewitt firm, Mr. Schultes was president of the Lymar Sales Corp., a commission concern. Surviving are his wife, Mrs. Louise Schultes; a son, Leonard; two brothers, Chester and Robert Schultes; and two grandchildren.

Irving J. Seskis

Irving J. Seskis, president of Schenley Laboratories, Inc., died at Ochsner Clinic in New Orleans March 5, where he had been a patient for one week. He had been under treatment at his New York home for about a year.

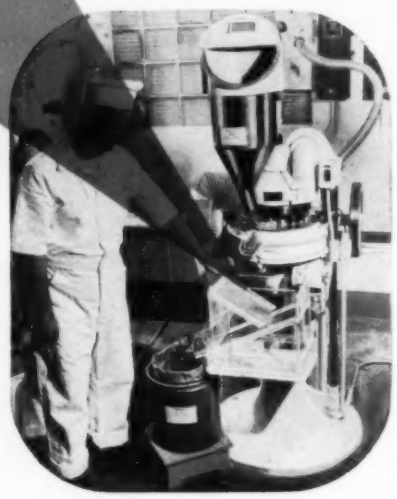
Mr. Seskis joined Schenley Industries, Inc. as a vice-president and director in 1940, a post he retained even after his appointment as head of the pharmaceutical subsidiary. He was 52 years old. Surviving are his wife, Evelyn, and two children, Alan C., and Mrs. Walter Harris, Jr., of New York.

Donald Wilson

Donald Wilson, associated in a sales capacity with Van Dyk & Co., Inc. for over thirty years, died at his home in East Orange, N.J. on March 18 at the age of 87. He is survived by his wife and daughter.

More than 200 products in one plant...

One of a battery of Stokes Tabletting Presses in the famous Lederle Laboratories plant at Pearl River, New York. Here more than 200 different tabletted products are made by Lederle on Stokes Tabletting Presses.



tabletted on Stokes presses! Big plants with many long-run items... small plants with many short-run batches... rely on Stokes equipment for perfection and uniformity of product; for low-cost operation and minimum maintenance. That is why Stokes equipment is so widely used throughout the world... universally depended on for reliable service even in factories far distant from service or parts facilities.

Stokes single-punch or rotary tabletting presses are adaptable to large or small production... to long-run or batch production... to tablets of round, square, oval, triangular, perforated or irregular shapes... to embossed or engraved surfaces. And there is even a hand model for laboratory work or the small plant.

All Stokes presses, whatever the size of tablet or speed of operation, produce tablets perfect in size, weight, density and finish with little labor and maximum efficiency.

...and Stokes Advisory Service makes the accumulated experience of more than half a century available to any pharmaceutical manufacturer who requires assistance in formulae, selection of equipment, operating techniques, or plant layout. No obligation, of course.

STOKES

STOKES MAKES

Plastics Molding Presses,
Industrial Tabletting
and Powder Metal Presses,
Pharmaceutical Equipment,
Vacuum Processing Equipment,
High Vacuum Pumps and Gages,
Special Machinery

F. J. STOKES MACHINE COMPANY, 5932 TABOR ROAD, PHILADELPHIA 20, PA.

MANAGEMENT FORUM

By Francis Chilson
INDUSTRIAL CONSULTANT

Scientific Management

Every time I hear this phrase I burp. I have never seen or heard of a single firm really scientifically managed. I have never had any experience with a firm that I could honestly say was very well managed in all departments. And it has been my observation that the bigger they are, the worse they are from a good management standpoint. In the drug and cosmetic industry emphasis is placed on marketing and the majority of men in the top management posts arrived through the marketing end of the business. Marketing they know and that end of their business is likely to be well organized and well managed. The other phases of their business are likely to be handled in a slip-shod fashion. In some instances, indeed, profits are so high in relation to invested capital that some of the big shots, not only don't give a damn about how the rest of their business is managed, but they will tell you that quite frankly. A plant manager is referred to as "one of those production fellows" as if he were slightly subnormal for being a production man; and, as for research chemists they're necessary (because everybody has 'em) but most of them are nuts—they don't understand marketing! As for comptrollers, auditors, bookkeepers and the rest of the office breed, they're queer but necessary evils too: they have no vision; they don't understand marketing either!

Man, the inventor of science and the scientific method, is anything but scientific himself especially when he is dealing with his own personal concerns or administering the affairs of other men. Hence management as it is practiced is not balanced or scientific; it is a series of compromises. When any part of a business gets so badly out of whack that it hurts, an uproar is raised until the situation is corrected for the time being. Because we are all human beings I expect management will always be an irregular affair.

But we like the phrase "scientific management". I wish I had a small fraction of the money spent in this industry trying to achieve it. It is characteristic of us as Americans that whoever invents the phrase gets credit for the fact. Fredric W. Taylor created the phrase and got credit for being the father of scientific management. What Taylor invented was not a management procedure at all but merely a means of measuring scientifically units of work in relation to time. He was the first of that horrible breed, the efficiency experts.

The actual inventor of what is still the closest approach to scientific management was of course Henry Ford, whose discovery of the assembly line technique created the mass production age and started a social revolution the effects of which will be felt for centuries.

The assembly line technique at one stroke created production control and planning; material scheduling and handling. Obviously a mechanism could not be assembled without interruption unless all component parts were at predetermined points along the assembly line when needed and in sufficient quantity. This implied organization and careful timing. And the parts themselves had to be manufactured in accord with a predetermined time schedule. Given predetermined material and labor costs and a measurable, organized flow of material through the plant and you had cost control; in other words "standard costs." But behind all this—and perhaps Ford's greatest contribution—was standardization of parts so that a Ford car could be repaired at a moment's notice anywhere in the world.

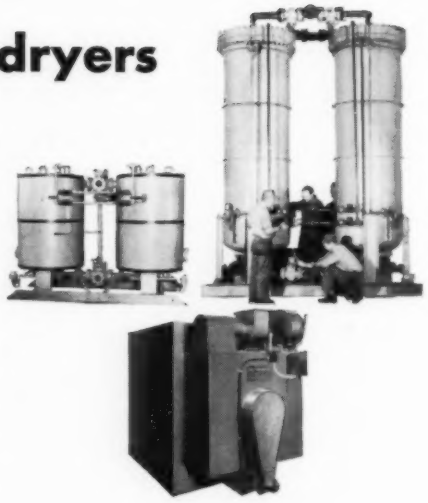
Ford may have been an evil man to many but no one can deny he started the age of mass—organized—production; he also started a social revolution by insisting that labor should be paid, not as little, but as much as it was possible to pay; he emphasized that social revolution by insisting that a product should be sold not for as much as the traffic would bear but as little as necessary to make a profit. He made necessities out of what had been luxuries and laid the foundation for a barrier against communism which in the end may prove to be

HAMILTON WATCH COMPANY

LABORATORY CHECKS ON MOISTURE IN COMPRESSED AIR

Date	Dep't	Dew Point	Grains/ cu. ft.	Remarks
4/20	Bal. & Flat S.	-50.0° C	.0124	Good
4/20	Works Lab	-50.0° C	.0124	Good
4/23	Bal. & Flat S.	-50.0° C	.0124	Good
4/23	Works	[illegible] C	.0124	Good
4/27	Works Lab	+4.0° C	2.800	Poor NOTE: This situation produced when the new compressor was thrown into use without passing the air through the Lectrodryer.
[illegible]/29	Bal. & Flat S.	-54.0° C	.0082	Good
4/29	Works Lab	-54.0° C	.0082	Good
5/3	Oil capsule changed			

A lab man's notebook tells why you need Lectrodryers



Page after page, the report on moisture conditions was "Good". Then *wham!* It jumped from a hundredth grain per foot of air to 2.8 grains. Howls of protest were heard all through this plant where precision products are made. "What's happened to our air?"

A new compressor had been placed in service, by-passing the old Lectrodryer. A quick switch was made and again the report became "Good".

Lab men's notebooks all over the world are telling this same story: Air, gases and organic liquids are being kept free of unwanted moisture by Lectrodryers. Processes are kept on the beam. Quality of products is maintained on production and in storage.

Find out what moisture is doing to your processes and products. Then let our engineers help correct those conditions. Write Pittsburgh Lectrodryer Corporation, 309 32nd Street, Pittsburgh 30, Penna.

In England: Birlec, Limited, Tyburn Road, Erdington, Birmingham.
In Australia: Birlec, Limited, 51 Parramatta Road, Glebe, Sydney.

LECTRODRYERS DRY WITH ACTIVATED ALUMINAS

LECTRODRYER

REGISTERED TRADEMARK U.S. PAT. OFF.

more formidable than all the "armies with banners." Ford came as close to scientific management as anyone has yet both in production and in distribution.

Plant Construction

The Austin index of construction costs has climbed to an all time high of 179. The year 1926 represents the base line of 100. The statistics are computed by Austin on a single story building without any embellishment. The buildings used in the drug and cosmetic industry are more elaborate than a single story machine-shop type of building and it is my opinion that costs for our type of construction have increased much more than the Austin index shows. My own experience shows that a substantial warehouse type building could be built before the war for about $4 per square foot. In 1947 the figure was $5. In 1950 $6. For the same years good manufacturing space ran: $6, $7, $8. Triple the figures for first class laboratory space and double them for air conditioned manufacturing space.

A Labor Policy for a Time of Stress

I was asked to prepare a labor policy for one of my clients Ivano Inc., manufacturers of synthetic plastic sponges. This company although the largest in its field, is not large as chemical companies go, but so multifarious are the applications of its principal product that the multiplication of its present sales volume within a short time is a certainty, subject only to the restrictions war conditions will place upon its primary raw and packaging materials.

In preparing the following statement of labor policy it seemed to me that certain basic principles should be observed:

A wage policy has no meaning unless it is correlated with a mutually acceptable cost of living index.

A wage policy should not be a secret thing, unknown to the people most affected by it and subject to change without notice or subject to application to individual workers on a variable or favoritism basis.

A wage policy should not only be fair but it should provide a means of participating in the growth of the company.

A wage policy should by its fairness, inducements and rewards for long and meritorious service obviate the need for unions or any outside representation for workers.

A wage policy should not penalize workers through loss of time when such lost time is clearly the fault of the management as for example when workers lose time through changes in plant.

A wage policy should provide, when workers lose time through the fault of the management, an inducement to return again when the layoff period is over simply because the training of new workers is a costly procedure and new workers invariably disturb the social cohesion that is established inevitably by workers who like their work and like working with people they know.

A wage policy should be published so that restrictions placed by the government on wages scales cannot affect the method of compensation employed by the company.

A wage policy should make as difficult as possible the pirating of help by war time industries, which in the final analysis, have nothing to offer but high wages for a short period of time.

(Parenthetically it is worthy of note that shortly after the Ivano Plan was published a restriction of its raw materials by the Federal Government necessitated the elimination of the second shift. The workers thus eliminated not only showed no resentment but sympathised with the company and promised to return again when materials are freely available.)

It will be observed that no pension plan is provided as yet. In its stead a liberal profit sharing plan is provided, which incidentally was in force for some years prior to the promulgation of this labor policy.

The Ivano Plan

I. The policy of the Company is and will always be to pay all hourly workers rates of pay equal to or better than the highest rates in this area for similar work.

II. In addition IVANO will pay at periodic intervals the following bonuses:

(a) Cost of Living Bonus:

This bonus will be determined in accordance with changes in the "Consumers' Price Index for Moderate Income Families in Large Cities"—"All items", published by the Bureau of Labor Statistics, U. S. Department of Labor, and hereafter referred to as BLS Consumers' Price Index. The cost of living allowance provided for shall be added to each employe's hourly earned rate and will be adjusted up or down each three months in line with the cost of living allowance provided for below:

BLS Consumers' Price Index	*Cost of Living allowance in addition to wage scale*
176.1 or less	None
176.2-177.3	1c per hour
177.4-178.5	2c per hour
178.6-179.7	3c per hour

and so forth, with 1c adjustment for each 1.14 point change in the Index.

This will be a temporary bonus and will be withdrawn when the BLS Consumers' Price Index reports an equivalent decline in living costs. In no event will a decline in the BLS Consumers' Price Index below 176.1 provide the basis for a reduction in the wage scale by job classification.

The amount of any Cost-of-Living allowance in effect at the time shall be included in computing overtime premium, night shift premium, vacation payments, holiday payments, etc.

In the event the Bureau of Labor Statistics does not issue the Consumers' Price Index on or before the beginning of the quarterly pay period, any adjustments required will be made at the beginning of the first pay period after receipt of the Index.

No adjustments, retroactive or otherwise, shall be made due to any revision which may later be made in the published figures for the BLS Consumers' Price Index for any base month.

AUTOMATIC PERFECT REGISTER
—permits putting your inspector on productive work!
NO EXCESS GLUE
—never any need to put girls to "wiping off" glue seepage.
NO BLISTERS OR LOOSE EDGES
—you achieve a lasting appearance of Quality!
SELF CLEANING
—permits a longer day's run on actual production.
EAU DE LAVENDER

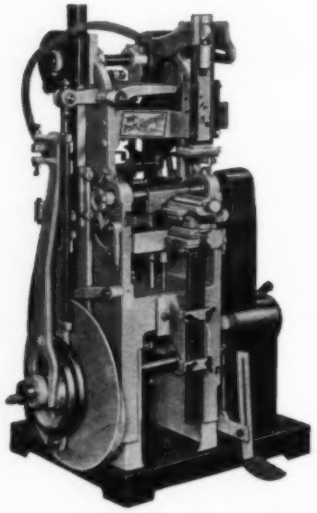
ONLY A PONY LABELRITE*

GIVES YOU THIS FAULTLESS LABELING!

The decision of hundreds of critical sales and production executives, backed by fulfillment of perfect performance justifies your comparison of what you get in labeling today, with what Labelrite advantages can do for you, in lowering costs while delivering better-looking products,—*fast and faultlessly!*

Predominantly used on quality products packaged in glass, paper or wood, by manufacturers of food, drugs, cosmetics, hardware, books, papetries and cardboard boxes.

Get FACTS,—and you'll get a LABELRITE!



*Reg. U. S. Pat. Off. 511

NEW JERSEY MACHINE *Corporation*

AUTOMATIC LABELING • PACKAGING — PAPER BOX MACHINERY • MAKERS OF THE PONY LABELRITE

FACTORY SALES AND SERVICE BRANCHES
325 W. HURON ST., CHICAGO 10, ILL.
1701 CAREW TOWER, CINCINNATI 2, OHIO
2500 W. 6TH ST., LOS ANGELES 5, CAL.

MAIN OFFICE & FACTORY: 1550 WILLOW AVENUE, HOBOKEN, N. J.

Cost of living bonus formula based on program of the General Motors Corporation.

(b) Length of service Bonus:

Every person who has completed two years of continuous service will be paid each year at Christmas a bonus of 5 per cent of the total wages earned for the year, excluding, however, all other bonus payments such as overtime, cost of living, etc.

For each additional year of service above the two year base period, an additional 1 per cent shall be added to the length of service bonus, and each year up to a maximum of 20 per cent.

(c) Merit Bonus:

At the end of each year all persons who have earned the length of service bonus will receive an additional bonus of not less than 2 per cent of the base wages earned for the year. This merit bonus will be scored on the following points:

Length of service,
Cooperativeness,
Suggestions,
Reliability,
Diligence,
Regularity,
Cleanliness,
Cheerfulness,
Efficiency.

The merit bonus for the year shall be paid in a single sum, but the percentage rate of the bonus shall be added to your base pay for the succeeding year. The merit bonus, therefore, not only rewards you for meritorious performance, but it also raises your base pay for the year after you have earned it.

III. Holidays:

Six holidays annually are recognized and will be paid for at regular hourly rates.

IV. Vacations:

Each year every employee having completed one full year of service shall be entitled to a vacation of one week with pay.

Those having completed two years shall receive two weeks vacation with pay.

Those having completed ten years shall be entitled to three weeks vacation with pay.

Those having completed twenty years of service will receive four weeks vacation with pay.

V. Insurance:

The Company maintains for your benefit, Workmen's Compensation Insurance as provided for by law.

The Company also maintains and pays 60 per cent of the cost of a group life insurance, hospitalization and surgical expense plan for all who have been with us sixty days or more.

VI. Sick Leave:

Any person who, in the previous year shall have earned the merit bonus, shall be paid while absent on sick leave, providing such absences do not exceed four days each year, and providing further, the Company is notified promptly on the first day of such illness as to the reason for the employe's absence.

However, when a person has been with the Company five years or more, extended leaves of absence for illness up to four weeks will be granted and will be paid for upon certification by a physician of the employe's choosing.

Persons who have been with us for two years or more who are forced to be absent by injuries sustained while at work and who are entitled to compensation insurance will also be paid full wages in addition to compensation benefits, up to a maximum of twelve weeks, upon certification by a physician of the employe's choosing.

VII. Overtime:

Overtime pay at a rate of time and one-half shall be paid for all time worked over 40 hours per week; and double time will be paid for the seventh consecutive day of work.

VIII. New Employes:

New employes shall be paid 10c per hour more than their starting base pay after they have completed a training period of two full weeks. The new rate schedule shall begin on the first day of the next succeeding payroll period.

Following the training period all new employes shall be considered to be on probation for a period of twelve weeks, to determine their fitness for the work and their desirability as your associates and co-workers. After the completion of the probationary period they shall be considered regular employes; but for purposes of bonus and vacation determinations, their employment shall be considered to have started on the first day they became associated with the Company.

New employes shall not be entitled to vacation pay until after they have completed one full year of service with the Company.

IX. Special Considerations:

There are certain conditions which affect the Company's ability to maintain full employment at all times. Some of these conditions are beyond the control of the Company, but other conditions are within its control.

It is definitely not the policy of the Company to penalize employes for interruptions of employment when such interruptions are caused by its own fault.

However, there are conditions over which the Company has no control and which affect not only the Company's ability to provide continuous employment, but also affect its ability to remain in business. For example: Employment might be interrupted for a varying length of time by war conditions which would make it impossible for the Company to obtain the basic raw materials out of which its product is made. Also, there are acts of God such as natural disasters of one kind or another which might force suspension of operations.

Moreover, strikes in the plants of raw material suppliers or on transportation facilities might make it impossible to obtain raw material supplies or to ship merchandise.

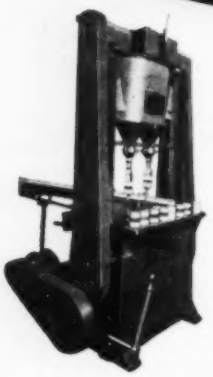
In all cases, therefore, when an interruption of employment occurs which is not the fault of the Company and could not be controlled by it in any way, the Com-

US

Manufactures Machines For

NET WEIGHING
GROSS WEIGHING
PACKING
PACKAGE FORMING & FILLING
CARTONING
CARTON SEALING
CARTON LINING
CARTON WRAPPING
PAPER BOX FORMING
PAPER BOX COLLAPSING

. . . they chose US



Model MH "BOND"
Semi-Automatic
TWIN STATION
FILLING MACHINE

The makers of the products illustrated, old-timers in the powder-packing field, chose the Model MH Bond Semi-Automatic Twin Station Filling Machine several years ago. Today they are still enthused with its versatility in handling varying-sized containers and widely different materials, with its speed and accuracy in filling cans, jars, cartons and shallow boxes. It is the ideal machine to volume-fill, gross-weigh or pack talcum powder, face powder and other types of cosmetic powders, as well as dry pharmaceuticals, ground spices, cocoa, flour and other fine powdered materials. What's more, with the MH Bond a single operator can fill up to 40 containers per minute with the closest accuracy. If you package cosmetics, drugs, chemicals, *in fact powders of any kind in any type of container,* it will pay you to get in touch with **US.**

US

NET & GROSS WEIGHING ★ PACKAGE FORMING & FILLING ★ CARTON SEALING, LINING, WRAPPING ★ BOX MAKING

AUTOMATIC BOX MACHINERY CO., INC.

Owning and Operating NATIONAL PACKAGING MACHINERY CO. ★ CARTONING MACHINERY CORP.

45 ARBORETUM ROAD, ROSLINDALE, BOSTON 31, MASS.

Branch Offices: New York ★ Cleveland ★ Chicago ★ San Francisco (Mailler Searles, Inc.)

pany will pay upon resumption of employment to all workers who return, an amount equivalent to 25 per cent of the workers' base pay for the shut down period, but not exceeding in total one full month's pay.

Whenever such unemployment occurs, the employe upon resumption of work will, for the purposes of bonus computations, vacation determinations, etc., be credited with the down time just as though there had been no work stoppage.

Whenever work stoppages occur through the fault of the Company, employes shall be paid one-half the base pay for the lay-off period. This will cover lay-offs due to machinery or building changes, machinery breakdowns, failure to maintain sufficient heat in winter, etc. Work stoppages of this sort, which may be properly regarded as within the control of the management must and will be acknowledged by the management at the time such lay-offs occur.

X. Profit Sharing Bonus:

At the end of each year when the Company's books have been closed, up to 20 per cent of the profits before taxes of this Company are set aside for distribution to all employes qualifying under the terms of the plan. To qualify means that you must have started to work on or before December 21 in any year, and have been with us continuously since. Military service, authorized leaves of absence, illness and lay-offs, providing that in the latter case the employe returns as soon as notified, are construed as being continuous service.

Your share of the profit sharing bonus is 15 per cent of your basic earnings. This does not apply to overtime or other bonuses. The money is deposited in the First National Bank of Chicago, and is invested in Government Bonds paying 2½ per cent interest.

The fund is administered by three Trustees, all of whom are employees of the Company, and you pay no tax on this money until such time as it is paid to you directly. It is primarily a retirement fund, and withdrawals can be made only because of illness emergencies and must have the approval of all three Trustees.

XI. Effective Dates:

Effective dates of certain of the items referred to in this statement will be January 1, 1951, with the exception, of course, of the profit sharing trust fund, which is already in effect.

XII. Change in Policy.

The company reserves the right to amend this labor policy as national or international conditions make such action imperative. No such amendments shall be made however without prior notice to and approval of all workers affected.

Patterson-Kelley Booklet

Patterson-Kelley Co., Inc., 67 Warren St., East Stroudsburg, Pa., manufacturers of heat transfer and process equipment, have issued a new 4-page condensed catalog showing representative items in their line of heat transfer equipment, blenders and process vessels such as kettles, mixers, and autoclaves. Copies of Catalog No. 10 will be sent on request.

The following information is supplied by manufacturers of the equipment described and claims made below by these manufacturers are passed along for what they are worth. Presentation of such notice in this department is not to be taken as endorsement of the claims or of the equipment.

Universal Moisture Tester

The new model Universal Moisture Tester, designed for all types of material, gives direct moisture percentage readings on a dial from 8½ to 40 per cent, instantly, without mathematical calculations or charts. Equipped with a built-in thermometer, the Universal Tester automatically indicates temperature of sample. No separate temperature tests are necessary.

The instrument is extremely simple to operate and is consistently accurate, giving the same reading repeatedly on the same sample. Complete tests are made in less than a minute.

Although the Universal operates by electricity, it requires no electric outlets or batteries and is fully portable. Descriptive literature and details of liberal free trial may be obtained from the Burrows Equipment Company, 1316-Dept. W. Sherman Avenue, Evanston, Illinois.

Glass Wall Filter

A new glass-walled filter, especially useful in research and development work, and in those commercial applications where the influent suspensions tend to have variable properties, is being produced by the Micro Metallic Corporation, 30 Sea Cliff Avenue, Glen Cove, New York. Porous stainless steel filter elements of the SURFAMAX and GRAVITAIN types in glass-walled containers permit full observation of the action of the filter.

For development purposes, the unit can be ordered complete with a centrifugal pump or with a positive displacement pump, mounted on an integral base.

UNIVERSAL FILLER

FOR EVERYTHING BUT SOLIDS AND LIQUIDS

Versatility is the keynote of S & S Universal Filling Machines; more than 150 different kinds of materials—drugs . . . cosmetics . . . foods . . . powders . . . pastes . . . and other household products—can be packaged economically, speedily. The Universal Filler automatically and precisely fills containers of varying shapes and sizes—from ¼ ounce up to 5 pounds—at speeds of 15-30 packages per minute. Write for complete details.

OTHER FILLING AND PACKAGING MACHINES
AT "SPEEDS TO SUIT YOUR NEEDS"

STOKES & SMITH Co

PACKAGING MACHINERY **PAPER BOX MACHINERY**

Subsidiary of Food and Chemical Corporation

4912 Summerdale Ave., Philadelphia 24, U. S. A.

fmc

Exclusive West Coast Distributor:
Anderson-Barngrover Division of FMC
San Jose 5, California

Get More Advantages with PERL Machines

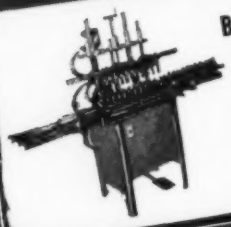
PISTON FILLING MACHINE

Power driven or manually operated; for jars and collapsible tubes, from fractional ounce to 16 oz. capacity; speed: to 45 fills per minute; exceptionally high accuracy. No airpockets in cream. Totally enclosed 3-way valve and special self-expanding piston.

TUBE CLOSING MACHINE

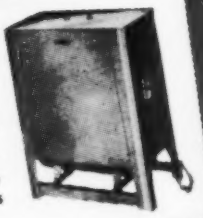
Power driven or manually operated; for tubes up to 2" diameter; speed to 35 tubes per minute. Makes 3 folds automatically with one revolution—without crimping or clips.

BOTTLE FILLING MACHINE



Gravity, vacuum or pressure. Up to 1 gal. capacity. Valves with automatic bottom shut-off guarantee dripless filling. Uniform and accurate filling levels assured by special quick-set micrometer height adjustment.

TWIN AIR CLEANING MACHINE



Two bottles automatically cleaned at a time by new automatic shut-off air cleaning valves. Built-in compressor, supply tank, motor. Speed to 60 containers per minute.

PERL

A Complete Line of Machines
•Bottle Filling • Can Filling
•Jar and Tube Filling and Closing
•Bottle Cleaning • Ampoule Filling

Write Today for Catalog D-3

PERL MACHINE MFG. CO.

68 JAY STREET BROOKLYN 1, N. Y.

The filter septum is fabricated from porous stainless steel sheet, having a percentage of voids of 50 per cent, with pore openings of closely controlled size, and in pore sizes ranging between 5 microns (.0002″) at the fine end to 165 microns (.0065″) at the coarse end. Filter elements are of extremely compact construction, and as much as 8 sq. ft. of filter area may be contained in a transprent body 4½″ in diameter and 40″ long.

In Types 304, 316, and Hastelloy B, the solid parts and porous medium is made of stainless steel or other corrosion resistant alloy, according to order. Pyrex glass is used to provide heat and pressure resistance.

Micro Metallic Corporation provides an integral stainless steel guard screen, surrounding the glass body, for those applications involving pressures higher than about 40 pis as a protection against the possible hazard of damage due to shattered glass.

Liquid and Semi-Paste Mixer

Charles Ross & Son Co., Brooklyn, has designed a new 1,000-gallon direct Motor Driven Liquid and Semi-Paste Mixer, #36. Available in sizes from 50 to 1,500 gallons (or larger), the mixer, with slight changes in the stirrer arrangement, can be used also as an agitated storage tank in the larger sizes.

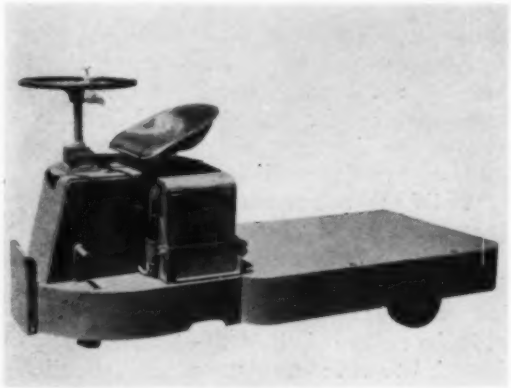
Load-Mobile

A new battery-operated freight truck for use in plants as a pick-up or delivery truck is being manufactured by the Market Forge Co. of Everett, Mass.

Called the Load-Mobile, the Marforge truck features 3-way operating positions which provide the utmost safety, comfort and maneuverability. The operator can either sit facing away from the load, face the load, or stand on the special step provided for easy access on and off the truck.

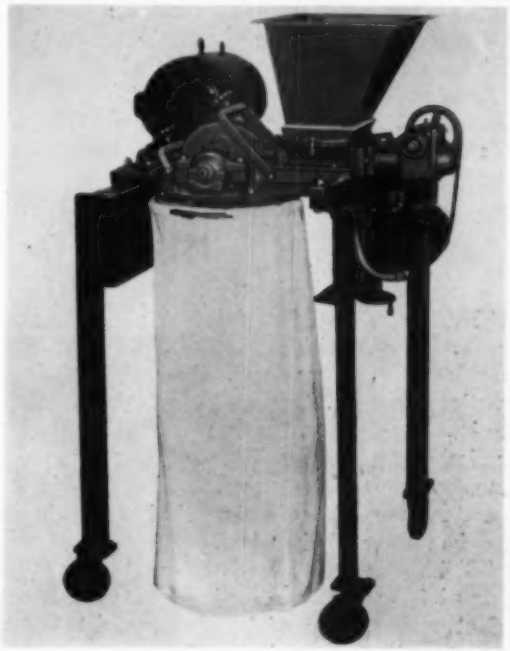
The Load-Mobile freight truck is said to handle every trucking job faster and easier and give high efficiency at low operating cost. Large capacity cushion rubber wheels with sealed ball-bearings assure minimum drain on the battery.

Made in two models, 3000 lb. and 5000 lb. capacity, the Load-Mobile travels at 3.5 to 4.0 miles per hour with no load. With full load, the 3000 lb. truck goes 3.0 miles per hour and the 5000 lb. at 2.5 miles per hour.



Pulva-Sizer

The new Model A PULVA-SIZER is a highly efficient impact type pulverizer with screw feed for grinding and blending face powder, cake make-up, rouge, etc. Also for general drug milling and shredding or granulating various barks, roots, leaves and similar materials. Capacity depends on the product being ground and fineness required. As an example however, this Model



A PULVA-SIZER with 5 H.P. Motor will grind and thoroughly blend face powder at rate of 400 to 500 lbs. per hour. For smaller capacity a 3 H.P. Motor is used. Many new features are incorporated in this design and literature describing and illustrating this new machine and its advantages will be available soon. Manufactured by Pulva Corporation, 550 High Street, Perth Amboy, New Jersey.

Automatic Ampul Printer

Ceragraphic, Inc., of 250 South St., Newark 5, N. J., announces the availability of the first Cera-fuse Automatic High Speed Ampul Printer ever to be put into practical operation. This equipment is manufactured by Machines Debuit, Paris, France. The Ampul Printer is the result of years of research and is an important milestone in the history of this manufacturer. In this country the equipment is distributed exclusively through Ceragraphic and may be inspected by appointment at the company's offices in Newark.

The new Automatic Ampul Printer enables a drug or allied manufacturer to print automatically, economically, and permanently on glass ampuls in his own plant. The new Cera-fuse Automatic High Speed Ampul Printer makes possible mass production printing on ampuls, vials, carpuls, glass rods, glass droppers, and miscellaneous glass tubes.

The Attack on Antihistaminics

(*Continued from page 451*)

for sale over-the-counter because they are non-toxic, the medical profession must scare people away from their use. If they are successful in this, then advertising of them to the public will decline sharply or cease altogether, and finally the medical profession will treat the great majority of cases of allergic conditions by prescribing the preparations which they succeeded in convincing the public are harmful if used other than with the advice of the physician.

As an example of the extremes to which the medical profession will go in such a situation we have before us a statement issued March 27 by the Committee on Public Health Relations of the New York Academy of Medicine which declares that "the antihistaminic preparations are of no value in the treatment of the true colds (whatever they are, Ed.) and the public should be warned of the hazards attending their use."

"The use of antihistaminic drugs," the statement warns, "is not without hazards. In some persons troublesome reactions occur. Fortunately most of the reactions are mild. They may, however, have serious results. For example, the drugs may induce drowsiness or dizziness, which may lead to accidents, particularly among drivers of automobiles, pilots of aircraft or operators of machinery in whom efficiency and judgment may be temporarily impaired.

"Children appear to be more susceptible to the drugs than adults and are more subject to convulsions. Eight infants under 2 years of age are reported to have died from the effects of antihistamines and several others are reported to have had convulsions. Most of these cases resulted from accidental overdose. (The fact that these resulted from accidental overdose means that they were left where these very small children could get at them and put them in their mouths, and in this case they are no different than candy laxatives, and even prescription drugs such as barbiturates. Ed.)

"The ill effects of the antihistamines are most frequently exerted on the nervous system, but they have been known to affect the heart and the digestive tract, and there have been a few cases in which granulocytopenia, a serious disease in which the white blood cells are diminished, has been traced to these agents. (If this is true as regards the products sold over-the-counter for colds, they would immediately be withdrawn from general sale by order of the Food and Drug Administration. Ed.)

"Packages of antihistaminic drugs sold to the public carry directions for dosage, but this is not sufficient protection against accidental overdosage or other hazardous use, especially in children. (A meaningless statement, generally referred to as double talk Ed.)

"Allergists have estimated that at least 20 per cent of the people who take antihistamines in the doses recommended will experience undesirable, if not dangerous, reactions. Several persons are reported to have attempted suicide by taking excessive doses of antihistaminic drugs, and one succeeded. (People are apt to try anything, some hoping to die, and others hoping to be discovered before they die. It is possible to kill oneself by too great an intake of most anything, even water. Ed.)

"Another hazard of the antihistaminic drug as a cure for colds is that what may appear to be a 'cold' is really the beginning of a serious infection, and this may be neglected while the sick person is taking antihistamines on his own responsibility. There have been cases of pneumonia in which antihistamines have been taken for several days before the true nature of the disease was discovered, and in this way valuable time for the proper treatment of the disease has been lost." (This is the old bugaboo of a "false sense of security" said to be caused by the taking of drugs when the first symptoms of a disease are noticed. Following this line of reasoning, people should not even take an aspirin for a headache but should call the doctor and ask him if he can tell whether it is only a simple headache or the start of a more serious condition. His answer will probably be that he will have to wait and see, and to call him up when and if the condition gets worse. Ed.)

The Committee points out that studies of the common cold have shown that it is not due to a single cause, and that colds may be caused by a variety of organisms and conditions, adding:

"The symptoms vary with the cause, the season, the person's susceptibility, and many other factors. If these symptoms are caused by allergy, the antihistaminic drugs may give relief, but no known effect on a virus or bacterial invasion has yet been demonstrated."

In evaluating reports that the antihistaminic drugs have stopped colds when taken within the first hour, the Committee says:

"It should be borne in mind that it is extremely difficult to judge within such a short time whether one actually has a cold. Again, colds may be so slight that they vanish within twenty-four or forty-eight hours without treatment. As a matter of fact, many persons who have been given placebos, or inert substances, instead of antihistaminics, have frequently done as well as those treated with the drugs, and sometimes even better."

Well, here is the best that the wise scheming heads of the medical profession can drum up to protect themselves against a growth or resurgence in self-medication. But don't feel smug about it because these people are far from finished, in fact, from past performances, it appears likely that they have only started. And they will keep at it until they have accomplished their purpose, or until the common use of these remedial agents becomes so widespread that they realize that they are only making themselves appear ridiculous by batting their heads against a stone wall. And remember that they have not always been successful in these attacks in the past—there was a time when they tried to find something wrong with aspirin.

INDUSTRY'S BOOKS

Modern Chemical Specialties, by Milton A. Lesser, Technical Editor, DRUG AND COSMETIC INDUSTRY, co-author of Glycerine (Its Industrial and Commercial Applications), Soaps in Industry, and numerous articles for the trade press on drug, chemical and allied subjects, 503 pp., Illus., MacNair-Dorland Company, New York, $7.25.

This text covers the formulation, manufacture and use of many polishes, cleansers, detergents, and allied chemical specialties. It contains 42 chapters, each dealing with a different specialty, including formulas and the manufacturing methods for that specialty. Chiefly, its various chapters are based on a series of some 42 articles, by this author, on chemical specialties which have been published over the past several years in Soap & Sanitary Chemicals, the monthly magazine. Each of these articles was in fact a condensation of available literature on the subject under discussion, including formulas for typical products and practical hints on manufacture. The book is designed to bring those in the industry up to date on developments in each field, in a concise and practical manner, and to "brief" newcomers to the field with a broad reference outline of the character and type of current developments. This work is grouped into six main sections as follows: Detergents and Cleaners; Polishes; Floor Care Products; Textile Products; Products for Leather Care; Industrial and Household Specialties. It is embellished with a number of full page, interesting illustrations, well bound and printed. Mr. Lesser needs no introduction to this industry. His careful, authoritative articles in a number of the leading trade journals are assurance that his latest work will be well received by this industry.

The Science of Health, 2nd Ed., by Florence L. Meredity, B. Sc., M.D., Fellow of the American Medical, American Public Health and American Psychiatric Associations, 48 tables and charts; 134 illustrations; 452 pages, The Blakiston Co., Phila., $3.75.

A new edition of a well-known text brought completely up-to-date with many simplified and diagrammatic illustrations and new material on contemporary subjects. New features include the expanded sections on vitamins and antibiotics, and current statistics on height-weight-age averages, the leading causes of death, and similar material presented in charts, tables and appendices. The mental health section contains an outstanding introductory discussion on the psychology of adjustment. The text's readable and interesting style gives a clear picture of the fundamentals of personal, physical and mental health, and helps toward an understanding of the health problems today.

Pharmacology, by Michael G. Mulinos, M.D., Associate Professor of Physiology and Pharmacology, New York Medical College, Second Ed., 484 pp., Oxford University Press, New York, $5.

The pace of medical discovery in the realm of therapeutics has become accelerated to such an extent that constant study and review are necessary in order to cope with the ever-increasing collection of knowledge. The discovery of the sulfa drugs and the purification of the antibiotics have opened heretofore unsuspected vistas for research in chemotherapy. The antihistaminics and the anti-thyroid drugs have been a step forward; while the radio-isotopes show promise of new horizons in the realm of diagnosis and treatment in the ultimate elucidation of vital phenomena. The present volume has been brought up to date in giving an orderly, scientific exposition of the current theories on how drugs act and how they may be used. The material that has been added to form the second edition has been woven into the fabric of the original Outline. Besides the addition of new material, especially on the subjects of radiobiology and the therapeutic application of the antibiotics, complete revision of some parts was necessary. The original aim of the Outline has been retained: to present a concise yet complete exposition, in outline form, of the science of pharmacology, designed to bring the practitioner of medicine up to date in this complex and rapidly growing field.

The Chemical Formulary, Volume IX, Edited by H. Bennett, 648 pp., Chemical Publishing Co., Inc., Brooklyn, $7.

This new Volume IX of the Chemical Formulary is a collection of up-to-date formulae compiled by the country's leading industrial and research chemists in each field of industry. The publishers state that not one formula contained in the previous eight volumes is repeated in this book. The following industries are covered: Adhesives, cosmetics and drugs, ceramics, glass and cement, colloids, farm and garden products, food, ink and marking compounds, insecticides, fungicides, and weed killers, leather, skins, and furs, lubricants and oils, metals and their treatment, paint, varnish, lacquer and other coatings, paper, photography, polishes, pyrotechnics and explosives, rubber, resins, plastics, and waxes, soaps and cleaners, textiles.

Synthetic Detergents, by John W. McCutcheon, M.A., F.C.I.C., 435 pp., Illus., MacNair-Dorland Co., New York, $7.10.

This is a practical text concerned with the synthetic detergents, and defining the various types of synthetics as to class, method of manufacture, application and processing. In addition to a thorough analysis of the manufacturing processes involved, a discussion of the source and preparation of raw materials, the author presents also an adequate theoretical background on the fundamentals of surface activity and the relation of surface activity to such characteristics as detergency, emulsification, foaming, wetting and dispersion. The text is well illustrated with tables, charts and photographs. More than 700 surfactants are tabulated in the appendix listing the manufacturers, formulas, and uses of the products. Still another valuable feature of this book is the brief summary introducing each chapter of the book. This text will be of interest to all in the detergent field, including those concerned with the manufacture, packaging, application and processing of surfactants, as well as those supplying raw materials.

Flavor is the thing that makes your product stand out from others. And Exchange Oil of Orange *has* the flavor...that distinctive and preferred taste unique to oranges grown in the sunny, sheltered valleys of California.

Try Exchange Oil of Orange for yourself. Give it all your tests for *quality, uniformity* and *strength.* You'll like it...and you'll buy it!

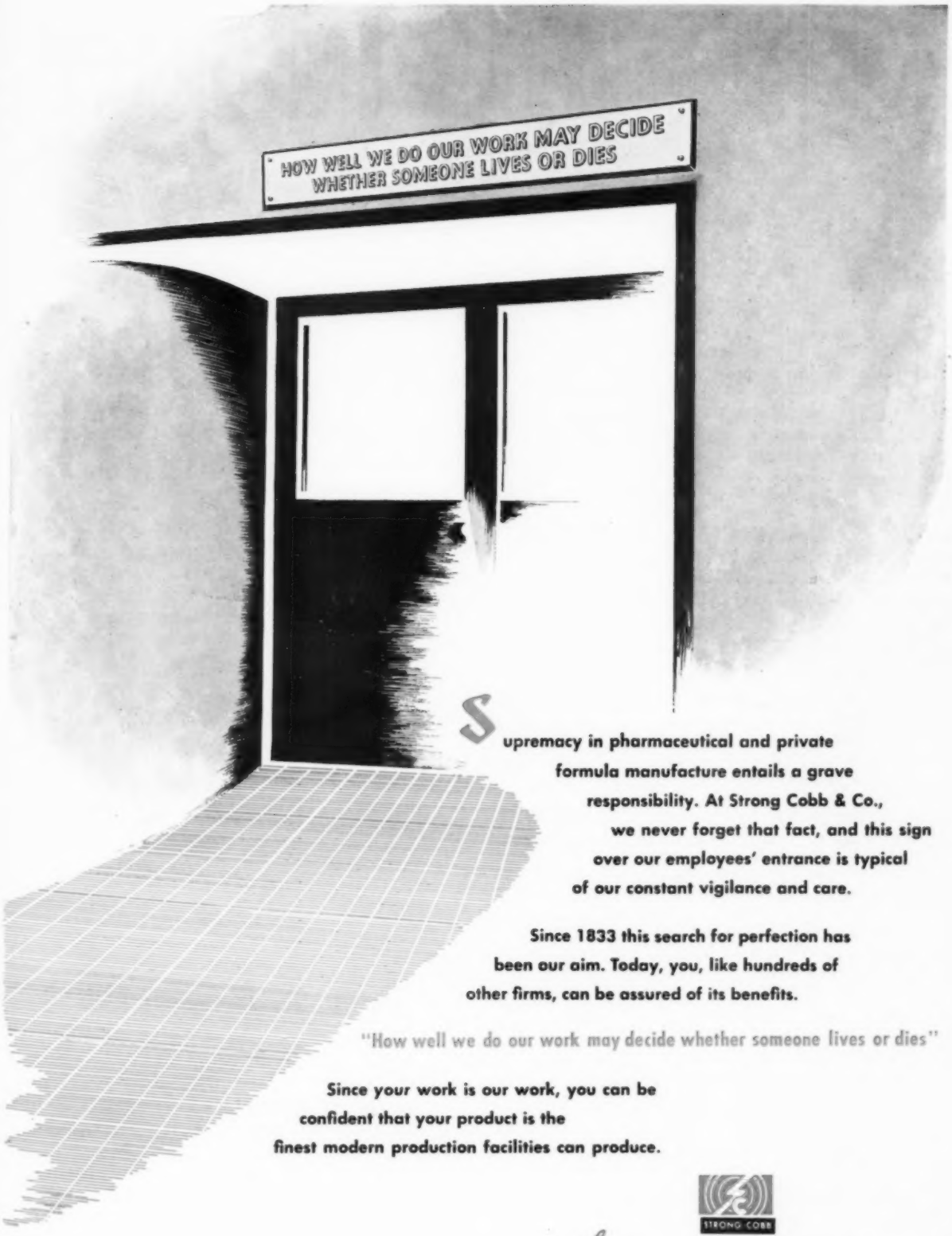
Exchange

OIL OF
ORANGE
U.S.P.

Distributed in the United States exclusively by
FRITZSCHE BROTHERS, INC.
76 Ninth Avenue, New York 11, N. Y.
DODGE & OLCOTT, INC.
180 Varick Street, New York 14, N. Y.

Distributors for:
CALIFORNIA FRUIT GROWERS EXCHANGE
PRODUCTS DEPARTMENT, ONTARIO, CALIF.

Producing Plant:
The Exchange Orange Products Co., Ontario, Calif.



Supremacy in pharmaceutical and private formula manufacture entails a grave responsibility. At Strong Cobb & Co., we never forget that fact, and this sign over our employees' entrance is typical of our constant vigilance and care.

Since 1833 this search for perfection has been our aim. Today, you, like hundreds of other firms, can be assured of its benefits.

"How well we do our work may decide whether someone lives or dies"

Since your work is our work, you can be confident that your product is the finest modern production facilities can produce.

STRONG COBB

Strong Cobb & Co. Inc.

2654 Lisbon Road, Cleveland 4, Ohio

AMPIN®

Originators and Developers of the Ampin for Automatic, Subcutaneous and Intramuscular Injection.

PATENT THOUGHTS AND TRENDS

*by Thomas Cifelli, Jr., Patent Attorney**

PATENTED SKIN PREPARATIONS—IV

This is a continuation of the review begun in the November, 1950 issue of This Journal and continued in the recent February and March issues. At the risk of perhaps too much repetition, it is believed well to state again that the patents covered by this review deal with skin preparations of more general application than the cosmetic creams and lotions treated in previous reviews. Further, while this review deals with all of the patents classified by the U. S. Patent Office in class 167, sub-class 90, it should not be considered to be complete.

U. S. P. 2,210,014—issued Aug. 6 1940 to W. K. Teller, assigned to The Pharma-Craft Corporation.

This patent suggests the use of salts of alkali and alkaline earth metals and organic acids for the same purpose with which U. S. 2,210,013 is concerned.

Claim 1 is illustrative:

A cosmetic astringent preparation containing an astringent material comprising an acid-reacting inorganic salt of a polyvalent metal and a proportion of a soluble alkaline salt of an aliphatic organic acid having not more than six carbon atoms.

U. S. P. 2,226,177—issued Dec. 24, 1940 to John W. Orelup et al.

Very small amounts (1 in 1000) of alkyl-substituted dihydroxy benzenes, in particular alkyl substituted hydroquinones, are suggested as deodorants for use on the surface of the human body to prevent rancidity and consequent odor of perspiration. Tertiary butyl hydroquinone is singled out for special mention.

Claim 4 is indicative of the amount of protection:

A composition of matter for use in deodorizing the human body without inhibition of normal perspiration containing as its active ingredient a substantially water insoluble alkyl substituted hydroquinone in a quantity sufficient to have substantial antioxidant effect, but insufficient to render the composition toxic, in a neutral non-toxic carrier having no deleterious action on the skin, said composition being adapted to be applied directly to the body to deodorize the same.

Gaylor, Cifelli & Jurick Newark, N. J.

U. S. P. 2,230,082, U. S. P. 2,230,083, U. S. P. 2,230,084—issued Jan. 28, 1941 to Jules B. Montenier. U. S. 2,230,082 discloses the use of materials having

the linkage to improve astringent materials having high acidity. Specific examples given are acetamide, propionamide, butyramide and amides of lauric, myristic, palmitic, oleic and stearic acids. Urethanes and urea are also disclosed. U. S. 2,230,083 and U. S. 2,230,084 deal with the use of imide and nitrile compounds as corrosion-inhibitors, specific examples mentioned including carbodimide, succinimide and phthalimide.

Representative claims are:

U. S. 2,230,082—A cosmetic astringent preparation including an astringent material and a soluble chemical compound having a nucleus.

U. S. 2,230,083—A cosmetic astringent preparation including an astringent material and a soluble imide.

U. S. 2,230,084—A cosmetic astringent preparation including an astringent material and a soluble nitrile.

U. S. 2,236,387—issued March 25, 1941 to John H. Wallace and Wilfred C. Hand and assigned to said Wallace.

The problem of U. S. 2,230,083 and other patents is tackled here, the suggestion being to use normally neutral water soluble amino compounds having one or more intact reactive amino groups as the protective ingredient to counteract the corrosive action of the astringents and the harm to the skin and fabrics.

Formamide, acetamide, and urea are specific examples of suggested protective materials.

Claim 1 is illustrative:

A perspiration inhibiting composition comprising a non-toxic water soluble protein coagulating metallic salt of a strong acid and a neutral, water soluble amino compound taken from the group consisting of the aliphatic amides and the aliphatic amino acids and having at least one intact, reactive amino group.

THE WALLACE AND HAND PATENT, U. S. 2,236,387, WAS DECLARED INVALID BY THE U. S. SUPREME COURT IN 1948.

U. S. 2,256,505—issued September 23, 1941 to Thompson, Marvin R. and assigned to William R. Warner & Co.

Aluminum hydrogel bases are said to be very versatile bases for ointments and anti-perspirant preparations. The aluminum hydrogels have an unguentary consistency, are non-staining, do not decrease the effectiveness of medicinal preparations mixed therewith, are capable of having their hydrogen ion concentration adjusted within a wide range, thereby producing compositions having widely varying characteristics, are odor adsorbent and astringent. The aluminum hydrogel may be prepared by dissolving a water soluble salt of aluminum, such as aluminum sulfate, in water, preferably at boiling temperature. About one pound of salt may be dissolved in each gallon of water. Diluted or undiluted ammonia water or other alkali hydroxide is then sprayed into the aluminum salt solution, with vigorous stirring, until a pH of 5.0 to 6.5 is attained.

A typical example of an astringent preparation follows:

Alumina hydrogel	**100 grams**
Glycerin	**25 to 60 grams**
Benzoic Acid	**1 gram**
Zinc oxide	**1 gram**
Perfume and artificial color tint in any desired quantity	

Claim 3 is indicative of the amount of protection:

A deodorant and antiperspirant preparation having ointment-like consistency,

ADVERTISEMENT—*This entire page is a paid advertisement* *Prepared Monthly by U. S. Industrial Chemicals, Inc.*

U.S.I. CHEMICAL NEWS

April ★ A Monthly Series for Chemists and Executives of the Solvents and Chemical Consuming Industries ★ 1951

Stainless Steel Hardened By Liquid Nitrogen Is More Versatile

A newly developed process is said to render stainless steel some 100 per cent harder than normal and to make it a far more versatile metal. The process involves heating the steel for a short time at about 2100° F., quenching in water, cooling to −300° F. in liquid nitrogen, rolling at that temperature from 1/4 inch down to 1/16 inch, and then aging at 750° F. for several hours. This combination of treatments reportedly produced not only great hardness but also increased tensile strength, yield stress, proportional limit, torsional yield stress, and fatigue strength.

One sample is claimed to have differed slightly in composition from the others. Its wear-resistance was described as equal to or greater than that of the best wear-resisting metal combinations known. This result has not yet been fully investigated, but if this characteristic can be reproduced, it should permit a great increase in the possible applications of stainless steel.

New Simplified Test For Water Hardness

A new method for determining hardness of water is based on a simple titration and is described as faster and more accurate than the older soap test. The titrating reagent in the new test is a standardized solution of disodium ethylene diamine tetraacetate, which reacts with calcium and magnesium to form soluble un-ionized complexes. A hardness indicator that is red in the presence of calcium and magnesium ions and blue in their absence gives the endpoint of the titration. Each milliliter of reagent used equals 20 parts per million of total hardness as calcium carbonate when a 50 milliliter sample is used.

Antibiotic Handbook

A manual has just been published which attempts to digest and correlate in a single book all the essential information on the numerous antibiotics isolated and studied to date and to organize them in ready-reference form. The new handbook gives methods of production, chemistry, toxicology, pharmacology, bacteriology, and related information. Bibliographies are all up to date to 1950 and thorough indexes to micro-organisms and antibiotics formed are included. Antibiotics are treated in alphabetical order.

New Resorcinol Assay Cuts Time and Error

Tedious water extraction of resorcinol in paste and ointments can be eliminated by extracting the pastes with hydrochloric acid and ether, according to a government scientist's report. The scientist points out that in extracting a strong resorcinol paste with hot water, the filter becomes clogged so that filtration usually takes several hours.

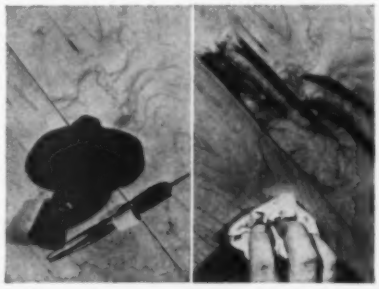
Coatings Produced With Aroflint Are Finding Many Specialty Uses

AROFLINT Coatings Combine Hardness, Chemical Resistance — Are Ideal for Floors, Furniture, Many Industrial Uses

AROFLINT 131, a room temperature curing phenolic-type resin introduced last November by U.S.I., is finding important applications because of the unique combination of properties it imparts to clear wood finishes. It makes possible the production of air-dry coatings that parallel phenolic molding resins in hardness, toughness, and resistance to solvents, chemicals, water, and heat.

Widening Circle of Uses

Coatings made with AROFLINT are already finding use on home furniture and floors; bars; industrial equipment such as textile bobbins and shoe lasts; and specialties — salad bowls for example. AROFLINT coatings are now under serious consideration for commercial use on office, school, and hotel furniture; sporting equipment; marine finishes; tool handles, hat forms, industrial equipment; gymnasium floors; and similar applications.



Effect of nail polish on panels coated with conventional furniture finish and with a coating made with AROFLINT. Conventional finish (panel on the right in each photo) is permanently damaged, while AROFLINT coating (on the left in each photo) is unaffected.

New Catalyst Improves Stability, Adhesion

Since AROFLINT's original introduction, development work has continued in an attempt to adapt it for still further uses. The result has been the introduction of a new catalyst for use with AROFLINT which imparts two distinct advantages. (AROFLINT is cured or dried by catalytic action, the catalyst inducing condensation and polymerization of the resin.) The new catalyst, known as U.S.I. Accelerator FX 134, permits formulation of a far more stable material since mixtures of the resin solution with FX 134 have a stability of 30-60 days, as compared to only four or five days with the originally recommended catalyst.

Potential Uses in Metal Coatings

The new catalyst also improves the properties of AROFLINT coatings on metal,

MORE

Methionine Melting Point No Criterion of Purity

The chemical literature[1,2] indicates that amino acids as a class exhibit no sharp melting points because of their thermal instability at high temperatures, and methionine is no exception to this general behaviour. This important essential amino acid has no true melting point, but is decomposed by heat over a range of temperature which is entirely dependent on the conditions of the melting point determination. For example, when a highly purified sample of methionine is heated at the rate of 3°C. per minute, starting at 20°C., the decomposition point was found to be 262°-262.5°C. When heated at the same rate, but this time starting at 260°C., the same sample was found to decompose at 271.6°-271.9°C. The decomposition point of the same sample varied from approximately 262°C. to 272°C., depending on the length of time the sample was in the heating bath. The conclusion is that the apparent melting point of methionine varies widely according to the conditions of heating and is of little use either for identification of this substance, or as a criterion of its purity.

(1) Taylor and Baker, "Sidgwick's Organic Chemistry of Nitrogen," Oxford Press, New Edition, p. 165.

(2) Shriner and Fuson, "The Systematic Identification of Organic Compounds," John Wiley and Sons, 3rd Edition (1948), p. 181.

New Drug for Peptic Ulcer

A new drug, claimed to have brought healing and caused disappearance of ulcers often in a matter of weeks, is being hailed for its promise of relief for ulcer patients who do not respond to conventional therapy. The drug, based on studies showing that female ulcer patients generally become free of symptoms during pregnancy, represents a fundamentally new approach to treatment of peptic ulcer. Studies have failed to reveal any undesirable side effects, according to researchers. Out of 16 patients given the drug after 15 weeks of unsuccessful conventional treatment, 15 are claimed to have become free of symptoms in four to six weeks.

April ★ **U.S.I. CHEMICAL NEWS** ★ 1951

High Speed, Automatic X-Ray Inspection Of Industrial Products

A new industrial X-ray development is expected to make possible high-speed, automatic inspection of thousands of industrial products. Core of the new inspection apparatus is a tiny crystal called a "semi-conductor." When excited with X-ray radiation, it acts as an amplifier tube. The crystals reportedly amplify the energy they receive one million times. On an area-for-area basis, they are over a million times more sensitive to X-rays than are the ionization chambers commonly used to measure X-ray radiation, and more than one thousand times more sensitive than photo-electric cells like those used in "electric-eye" applications.

Acrylic Dental Fillings

A catalytic method for polymerizing acrylic resins at low temperatures to make possible their use as dental fillings was described at a recent scientific meeting. Advantages claimed for these resins are that they can be made to match tooth color quite readily, are comparatively inert in oral fluids, and may be inserted quickly and easily into tooth cavities. Government researchers are continuing work to overcome several disadvantages, which include a larger shrinkage than direct filling materials, color changes, and the release of heat during polymerization in the tooth.

CONTINUED

Aroflint Coatings

since it imparts better adhesion to metallic surfaces, so that AROFLINT now has many potential uses in metal coatings as well as in wood finishes. Coatings catalysed with the new FX 134 have been found useful for numerous special applications on rigid metal surfaces. AROFLINT 131 without catalyst can also be utilized as a baking finish on metal in the production of chemical- and solvent-resistant coatings for tanks, drums, and similar applications.

Aluminum Oxide Lab Ware Is Strong, Non-Porous, Resistant to Corrosion

Development of a successful process for making crucibles and other laboratory ware from aluminum oxide has been reported. The crucibles are said to be 99.8 per cent pure, strong, and of a transparency rivaling that of fine china. They will not break when dropped from a height of several feet and are non-porous, highly resistant to corrosion, and not subject to chemically-induced changes.

The material reportedly has a compressive strength of about 500,000 pounds per square inch which it retains up to about 2000°F. It is expected to be useful in applications involving the high temperatures necessary to melt super-hard metals. One possible use for the material is as an alloy in making cutting tools to machine super-hard metals. Another possibility, for use in jet aircraft parts subject to high temperatures, is mixing metal and the aluminum oxide ceramics.

Shirtsleeve Chemistry — Linen from Seed Flax

A new chemical retting process may make it possible to increase world production of both linen and linseed oil without increasing acreage of flax. Nearly all the linen produced now comes from flax grown specifically for that purpose — flax pulled while still green, before much lignin has developed in the stems. Flax grown for seed is allowed to mature and the straw discarded as waste because, with its high lignin content, retting it for producing linen was considered impossible.

In the new process, ripened seed-flax straw is subjected to decortication in a special machine under controlled humidity. The resulting material is made into a roving which is chemically retted by dilute solutions of alkaline sodium hydrosulfite under controlled pH, temperature, and concentration. The product is washed and spun wet to yield high grade linen yarn which tests indicate is as good as imported linen.

TECHNICAL DEVELOPMENTS

Information about manufacturers of these items may be obtained by writing U.S.I.

"Shock-treating" liquids and solids in liquid suspension with a new "mill" in which a high speed circular saw strikes a jet of liquid is said to modify properties of slurries, change viscosity of solutions, affect degree of polymerization, and speed up reaction rates. **(No. 669)**

For fast, precise, automatic determination of moisture in ether, alcohol, acetone, benzene, chlorinated hydrocarbons, and most solvents, and in solids, a new instrument is on the market. **(No. 670)**

A chamois-type fabric, said to look, feel, and absorb water like natural chamois yet cost 1/3 as much, reportedly withstands gasoline, grease, and powerful detergents. It can be used to clean walls, floors, mirrors, windows, tile, and autos. **(No. 671)**

A new phenolic resin for hot-press plywood gluing is claimed to produce glue lines passing government military specifications. **(No. 672)**

For high precision measurements of dry thickness of non-electrical conductive coatings and other sheet-like materials (including aluminum and other non-ferrous metals), a new instrument is available. **(No. 673)**

For adhering polyvinyl chloride finishes to rusty steel, a new primer is said to reduce "creep" from rusted surfaces to a small fraction of that with regular primers. **(No. 674)**

A new service for plants using instrument tubing or fluid transmission lines subject to moisture or corrosive atmospheres involves extruding a chip-proof, corrosion-resistant vinyl or polyethylene coating over the customers' tubing. **(No. 675)**

A new low-cost, spray-type deodorant for household use is claimed to electrostatically precipitate, absorb, and "wash" away odors and smoke. **(No. 676)**

An extra high heat resistant aluminum paint (silicone-based) fuses with surface metal immediately on application, withstands temperatures up to 1,700°F., and forms a bright, elastic finish resistant to moisture, corrosion, mild acids, alkalis and industrial fumes, according to the makers. **(No. 677)**

A new antistatic and cleaning agent for methyl methacrylate moldings, sheets, etc., is described as an inexpensive, highly effective, fast-drying, easy-to-apply liquid. **(No. 678)**

PRODUCTS OF U.S.I.

ALCOHOLS
Amyl Alcohol (Isoamyl Alcohol)
Butanol (Normal-Butyl Alcohol)
Fusel Oil—Refined
Propanol (Normal-Propyl Alcohol)
Ethanol (Ethyl Alcohol)
Specially Denatured—all regular and anhydrous formulas
Completely Denatured—all regular and anhydrous formulas
Pure—190 proof U.S.P., Absolute—200 Proof
Solox*—proprietary solvent—regular and anhydrous

ANTI-FREEZE
Super Pyro* Anti-Freeze
U.S.I. Permanent Anti-Freeze

ANSOLS
Ansol* M
Ansol* PR

ACETIC ESTERS
Amyl Acetate—Commercial and High Test
Butyl Acetate
Ethyl Acetate—all grades
Normal-Propyl Acetate

OXALIC ESTERS
Dibutyl Oxalate
Diethyl Oxalate

PHTHALIC ESTERS
Diamyl Phthalate
Dibutyl Phthalate
Diethyl Phthalate

OTHER ESTERS
Diatol*
Diethyl Carbonate
Ethyl Chloroformate

INTERMEDIATES
Acetoacetanilide
Acetoacet-ortho-chloroanilide
Acetoacet-ortho-toluidide
Acetoacet-para-chloroanilide
Ethyl Acetoacetate
Ethyl Benzoylacetate
Ethyl Sodium Oxalacetate

ETHERS
Ethyl Ether, U.S.P.
Ethyl Ether, Absolute—A.C.S.

ACETONE — A.C.S.

FEED PRODUCTS
Curbay B-G*
DL-Methionine
Riboflavin Concentrates
Special Liquid Curbay*
U.S.I. Vitamin B_{12} and Antibiotic Feed Supplements
Vacatone* 40

RESINS (Synthetic and Natural)
Arochem*—modified types
Arofene*—pure phenolics
Aroflat—for special flat finishes
Aroplaz*—alkyds and allied materials
Congo Gums—raw, fused & esterified
Ester Gums—all types
Natural Resins—all standard grades

INSECTICIDE MATERIALS
CPR Concentrates: Liquid & Dust
Piperonyl Butoxide
Piperonyl Cyclonene
Pyrenone* Concentrates: Liquid & Dust
Pyrethrum Products: Liquid & Dust
Rotenone Products: Liquid & Dust

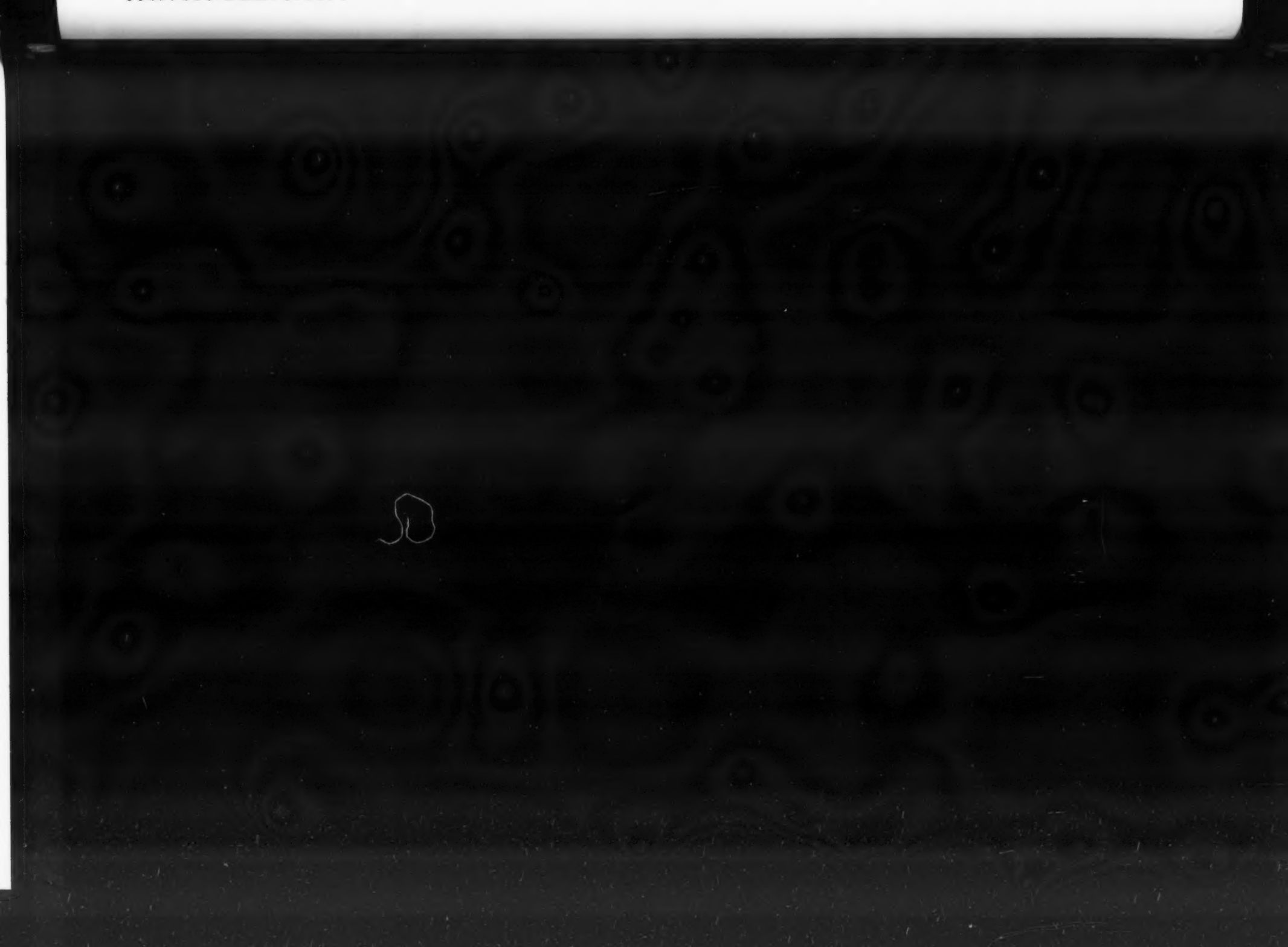
INSECTIFUGE MATERIALS
Indalone*
Triple-Mix Repellents

OTHER PRODUCTS
Collodions
Ethylene
Nitrocellulose Solutions
PiB*—Liquid Insulation
Urethan, U.S.P.
Special Chemicals and Solvents

*Reg. U.S. Pat. Off.

U.S.I INDUSTRIAL CHEMICALS, INC.

60 EAST 42ND ST., NEW YORK 17, N.Y. U.S.I. BRANCHES IN ALL PRINCIPAL CITIES



comprising a base for imparting said ointment-like consistency, deodorant and antiperspirant properties to said preparation consisting of about 100 parts by weight of an astringent, odor-absorbent alumninum hydrogel which dries upon application to the skin without leaving a powdery residue and contains about 75 to 85 per cent water by weight, said hydrogel being prepared by reacting an alkali with an acid aluminum salt in boiling aqueous solution at a pH value between 5.0 and 6.5, the salt and the water being in the proportion of about one pound of said salt to one gallon of water, in admixture with about 25 to 60 parts by weight of a hygroscopic substance capable of maintaining the water content of the hydrogel substantially constant.

U. S. 2,260,173—issued October 21, 1941 to Max Dohrn et. al. and assigned to Sherka Chemical Co.

Claim 1 of the patent gives an idea of the disclosure and protection:

A composition for protection from sunlight containing therein a sufficient amount to give such protection of a solid ester of wax-like consistency, said ester being the reaction product of an acid taken from the group consisting of salicylic, umbelliferone acetic, dichloropyridine-carboxylic, and oxy-naphthoic, with an alcohol taken from the group consisting of lauryl, cetyl, octadecanol, cholesterol, and abietinol.

U. S. 2,267,200—issued December 23, 1941 to Hersberger et. al. and assigned to The Atlantic Refining Company.

Certain resins are suggested as light filters in connection with anti-sunburn preparations. These resins include those isolated from cracked or uncracked petroleum distillates, residues, tars, pitches, and asphalts by means of solvent and/or adsorbent treatments; synethetic resinous materials produced by the catalytic or thermal polymerization of constituents of hydrocarbon oils or gases; resins produced by condensation reactions of phenolic compounds with aldehydes, amines, and other reactive compounds; and naturally occurring resins having the proper light-absorption properties.

Amounts of the resin as low as 0.25 per cent to about 2.0 per cent by weight are sufficient.

Claim 1 is illustrative:

A composition for preventing sunburn, which comprises a vehicle having dispersed therein a small quantity of a resin derived from petroleum and capable of absorbing light of wave lengths normally tending to produce sunburn.

U. S. 2,274,725—issued March 3, 1942 to Meeker et. al. and assigned to Schering Corporation.

This is another one of the long line of patents involving suggestions for making anti-sunburn preparations. The idea of this patent is to use hydroquinone as the light filter agent, and the metabisulfites of alkali and alkaline earth metals are employed to inhibit the oxidation and discoloration of hydroquinone.

Claim 1 is illustrative:

A product for use in preventing sunburn of the human skin when exposed to sun rays, but permitting the passage of wave bands having a beneficial effect upon human skin, comprising a creamy preparation adapted to be spread upon the skin and containing a substantial amount of a creamy, non-irritating vehicle carrying hydroquinone distributed there through and an anti-oxidant of the group consisting of metabisulfites of alkali metals and alkaline earth metals, said creamy preparation being non-irritating to the skin, the anti-oxidant being present in an amount sufficient to give the preparation a pH value under 7, said preparation being stable and retaining substantially its normal color over long periods of time.

U. S. 2,279,468—issued April 14, 1942 to Lahousse et. al. and assigned to Societe des Usines Chimiques Rhone-Poulenc.

The solubility of 3-methoxycoumaric esters, which possess anti-sunburn properties, is improved by using them in the presence of the salicylates of mono- or poly-alcohols, such as butyl-salicylate and glycol-mono-salicylate.

Claim 1 is illustrative:

An anti-sunburn preparation comprising a mixture of an alkyl ester of 3-methoxy-coumaric acid and an oil-soluble, liquid ester of salicylic acid in a common oily excipient, the concentration of the coumaric acid ester in said preparation being greater than would be obtainable by dissolving the same ester in the same excipient in the absence of said liquid ester of salicylic acid.

U. S. 2,294,140—issued August 25, 1942 to Walter A. Taylor and assigned to Atlas Powder Co.

The use of novel emulsifiers to give water-in-oil deodorant creams is taught by this patent.

The emulsifiers are esterified polyhydroxylic materials of the types: cyclic inner ethers of hexitols, particularly the hexides; or mixtures of cyclic inner ether of hexitols with cyclic inner ethers of hexane pentols.

The advantages of a water-in-oil emulsion over the oil-in-water type are set forth. For example, since the water is the internal phase and since the usual deodorants are water soluble, the cream will not dry out to deposit the astringent on the skin, thereby irritating it.

Claim 4 is illustrative:

A deodorant cream of the water-in-oil type comprising an oil phase, an aqueous phase, a deodorant, and an emulsifier consisting essentially of a mixture of hexide monoester of a fatty acid having at least 6 carbon atoms and the other esters produced in the reaction of a polyhydroxylic material selected from the group consisting of hexitols, hexitans, and mixtures of hexitols and hexane pentols, with the said fatty acid with at least 6 carbon atoms at elevated temperatures and in the presence of an acidic catalyst, said mixture having a ratio of fatty acid equivalents to carbon atoms of polyhydroxylic residue of from about 0.15 to 0.25, and the ratio of hydroxyl value to ester value of said mixture being from about 0.5 to 2.0.

U. S. 2,327,899—issued August 23, 1944 to Samuel Isermann and Ernst Ohlsson.

Esters of amino benzoic acids and polyhydric alcohols are suggested as anti-sunburn agents.

These agents may be used in concentrations as low as from 1-3 per cent. A preferred agent is the monoglyceryl ester of para amino benzoic acid.

Claim 1 is illustrative:

A light intercepting cosmetic composition characterized by its ability to intercept light of short wave length, neutral action toward nerve endings near the surface of the skin of human beings and continuous film formation when deposited upon the surface of the skin, said composition comprising an ester consisting of a polyhydroxy alcohol mono substituted with p-amino benzoic acid.

U. S. 2,334,348—issued November 16, 1943 to John Miglarese and assigned to The National Marking Machine Company.

And still the list of anti-sunburn preventives grows.

This time, heterocyclic, aromatic, light colored, fluorescent basic compounds are suggested. They are said to possess the usual desirable characteristics and in addition to adhere to the skin and hair after the vehicle has been removed, in a manner similar to that of a basic dyestuff applied to silk or wool. Therefore, these agents are said to protect the user from the injurious effects of direct sunlight for a relatively long time.

Examples of some of the recommended agents are 9-ethyl-3-dimethyl-amino carbazole, 4-methyl-7-diethylamino coumarine, 3-methyl-5-dimethylamino azimidobenzene and 3-dimethylamino acridine.

These agents can be applied in the form of a solution, such as a mixture of ethanol, water and glycerol; dissolved or dispersed into a paste with such vehicles as vanishing cream or "Carbowax;" or diluted with some inert powder, such as talcum powder or zinc stearate, and dusted on the skin and hair.

Claim 1 follows:

A sunburn preventive to be applied as a coating to human skin and hair for the purpose of rendering the outer surfaces thereof, after removal of the coating, opaque to ultraviolet light comprising a non-toxic carrier having dispersed therein a colorless, fluorescent, basic compound, substantive to human skin and hair, selected from the group consisting of 9-ethyl-3-di-

(Continued on page 528)

CHEMICAL **KESSCO PRODUCTS** SPECIALTIES

KESSCO WAX "A-21"
ACID EMULSIFIER
FOR
ANTI-PERSPIRANTS and DEODORANTS

BUTYL STEARATE
DIGLYCOL STEARATE
GLYCERYL MONO STEARATE
PROPYLENE GLYCOL MONO STEARATE
FOR USE IN
COSMETICS • PHARMACEUTICALS • ALLIED TRADES

ESTABLISHED 1921

KESSLER CHEMICAL CO., INC.
STATE ROAD and COTTMAN AVE. • PHILADELPHIA 35, PA.

PLYMOUTH CRYSTAL "E" WHITE OIL

This oil has been the standard for many of America's very oldest cream manufacturers since their origin. It is water-white and crystal-pure . . . odorless and tasteless . . . of U. S. P. Acid Test and free of fluorescence . . . especially refined for the cosmetic industry and as pure as a mineral oil can be made. Because of its extra lightness you should specify it for the soft, light, fluffy creams demanded today.

Other mineral oils of heavier body if desired.

PLYMOUTH PETROLATUMS U. S. P.

All Petrolatums are refined and straight filtered from Pennsylvania Crude. None are acid treated and all are long fiber and of U. S. P grades.

Both soft, low melting point consistencies and pharmaceutical grades . . . as well as the regular grades for the drug and cosmetic industry. All grades are offered from Snow White to Amber.

A *Complete* LINE OF COSMETIC RAW MATERIALS

M. W. PARSONS-PLYMOUTH, Inc.
59 BEEKMAN STREET
NEW YORK, N. Y., U. S. A.
Telephone: BEEKMAN 3-3162—3163—3164
Cable Address: PARSONOILS NEW YORK

CHOLESTEROL IN ITS MOST ACTIVE AND EFFICIENT FORM

the

AMERCHOLS

are naturally superior

The AMERCHOLS are surfactants which are NATURALLY good for the skin and hair. They are odorless, color free forms of cholesterol and related rare sterols which we isolate in purified form from animal tissues. They are stable in the presence of acids, alkalies and most drugs.

Try AMERCHOL L-101 in your hair preparations. It is a highly effective liquid-cholesterol penetrant.

WE KNOW OF NO CASE OF ALLERGY DUE TO AN AMERCHOL

Our research laboratories are available to you for advice and information. Our booklet will help you formulate the AMERCHOLS in O/W and W/O emulsions.

LABORATORY DATA

FOR PHARMACEUTICALS AND COSMETICS

AMERCHOL STEROL PRODUCTS

AMERICAN CHOLESTEROL PRODUCTS INCORPORATED MILLTOWN, NEW JERSEY

AMERICAN CHOLESTEROL PRODUCTS INCORPORATED

MILLTOWN - - - NEW JERSEY

BENJ. FRENCH, INC.

ESSENTIAL OILS -- AROMATIC CHEMICALS

DESCOLLONGES PRODUCTS

DORELIA C

A very effective base for modern bouquets, imparts an original and most interesting note reminiscent of ripe cherries.

HIERATOL

Another interesting base with a warm and very persistent odor of incense.

160 Fifth Avenue *New York 10, New York*

COMPOUNDER'S CORNER

Palatable B-Vitamin Syrup with Iron

A pleasant-tasting syrup, which children like, and which is designed to furnish therapeutic doses of thiamine, nicotinic acid, riboflavin, and ferrous sulfate is offered in a recent bulletin of the Bureau of Professional Relation of the Florida College of Pharmacy. Known as Syrup B-Nicoflavin with Iron, it is made from:

Thiamine hydrochloride	**96.0 mg.**
Nicotinic acid amide	**400.0 mg.**
Riboflavin	**24.0 mg.**
Ferrous sulfate	**4.2 Gm.**
Citric acid	**0.5 Gm.**
Distilled water	**60.0 cc.**
Syrup orange, to make	**240.0 cc.**

The dose for adults is one tablespoonful three times a day, while the dose for children is one to four teaspoonfuls three times a day, according to age.

Agar from Various Sources

Although small amounts of agar were produced in other countries, says J. L. Forsdike (*J. Pharm. & Pharmacol.* 2: 796, 1950), prior to World War II almost all of the world's supply of this material came from Japan. During the war, however, the production of agar was developed in many other countries and the material from these various geographical sources was placed on the market. With a return of the Japanese product, it was felt that a comparison of these agars with Japanese strip agar would yield valuable information. From these studies it was concluded that New Zealand, South African and Australian agars are of the same type as Japanese agar. New Zealand agar is generally superior to Japanese. South African is about equal to Japanese. Australian is much inferior in gel strength and color, and contains more ash and insoluble matter. So-called British and Danish agars, on the other hand, apart from their inferiority in gel strength and in melting- and setting-temperatures, are of quite different character from the Japanese material and are to be regarded as substitutes for, rather than as varieties of, agar. It would be preferable that these materials should be sold under some name other than "agar."

Instrument Sterilization

In a consideration of methods for sterilizing instruments, it is noted in the *British Medical Journal* (2:1128, 1950) that for any materials for which neither dry nor moist heat is suitable, chemical sterilization is the only alternative. Formaldehyde vapor is the only possibility for complex instruments, especially those with electrical connections which cannot be immersed in water. If immersion is feasible, the best solution is one containing formalin. That prescribed in the *National War Formulary is:*

Borax	**15 Gm.**
Formalin	**25 ml.**
Phenol	**4 Gm.**
Water, to make	**1,000 ml.**

Such solutions produce absolute sterility. Formalin destroys all forms of bacterial life, including spores, but to do this it requires time, six hours' exposure is the minimum. There is no rapid chemical method of achieving this result. If it is considered necessary to kill only pyogenic cocci and other non-sporogenous bacteria, and provided that the instrument is clean and has no crevices, disinfection can be carried out in about 15 minutes with any quickly acting disinfectant, such as 75 per cent spirit, 5 per cent phenol, or 2 per cent lysol.

Standards for Sorbitol Solution

The Toilet Goods Association Standard Number 36 for Aqueous Solution of Sorbitol was made available to the industry on February 2, 1951. According to this specification, Aqueous Sorbitol Solution consists essentially of a solution of the hexahydric alcohol $CH_2OH(CHOH)_4CH_2OH$. The solution is water white, odorless and has a pleasantly sweet taste. Data are given with respect to solubility, free acids and alkali, water content, refractive index, residue on ignition, specific gravity, percentage of *d*-sorbitol, limits of iron, arsenic and lead content, and the permitted percentages of reducing and non-reducing sugars. Where needed, methods for making the required tests or determinations are indicated.

Silicone as a Syringe Lubricant

In a communication to the *British Medical Journal* (1:300, 1951), G. H. Darling and J. G. C. Spencer describe the use of a silicone to lubricate syringes which are to be sterilized by dry heat. They noticed that when liquid paraffin was used as a lubricant, after repeated sterilization, it frequently charred, despite careful cleaning. The resulting carbon deposit is difficult to remove and discolors the syringe so that the graduation marks become difficult to read; eventually, the plunger may stick in the barrel.

These difficulties have been overcome through the use of silicones as lubricants; the silicone being dissolved in methylated ether as a spreading agent. The tip of the cleaned syringe is dipped in this solution before insertion into the barrel and subsequent sterilization. Chemically inert, the silicone has a comparatively high boiling point and is unaffected by the temperature of sterilization. No charring occurs, and, because of the water-repellent properties of the substance, the syringe may be readily cleaned after use. They also found that the coagulation of blood in the syringe was appreciably delayed and that the silicone appeared to have no effect on samples taken for bacteriological, hermatological and biochemical investigations.

Cream Shampoo Thickener

Thickening agents, such as sodium stearate, for cream and liquid shampoos made with synthetic detergents tend to reduce the lathering properties greatly. Hair conditioning agents of various kinds are also usually added to reduce the harsh feel of the hair when washed with synthetic detergents. According to the Glyco Products Co., the use of Polyethylene Glycol 400 (Di) Stearate, a completely organic, non-ionic, thickening agent tends to minimize the reduction in foam or lather. Being non-ionic, no hard water soap scums form as is possible in the case of sodium stearate soaps. In addition, Polyethylene Glycol 400 (Di) Stearate appears to have definite hair conditioning properties and, depending on the formulation, other hair conditioning

agents may not be required. Polyethylene Glycol 400 (Di) Stearate is indicated for use in solid cream shampoos and in liquid and clear liquid shampoos. The following formulas indicate the basis on which Polyethylene Glycol 400 (Di) Stearate is used. Thus, a solid cream shampoo can be made from:

Sodium Lauryl Sulfate (Duponol WA Paste)	**50 parts**
Magnesium Stearate	**1 part**
Polyethylene Glycol 400 (Di) Stearate	**3 parts**
Water	**46 parts**

A clear liquid shampoo consists of:

Triethanolamine Lauryl Sulfate (Dubonol WAT)	**50 parts**
Polyethylene Glycol 400 (Di) Stearate	**5 "**
Water	**45 "**

Information on Polyethylene Glycol 400 (Di) Stearate may be obtained from the manufacturer, Glyco Products Co., Inc., 26 Court St., Brooklyn 2, N. Y.

Potentialities in Absorption from Ointments

In a symposium on formularies and formulation, J. P. Todd (*J. Pharm. & Pharmacol.* 2:919,1950) pointed out that one of the fields which still offered great scope for ingenuity, and possible alternatives to parenteral administration, was the formulation of preparations, such as ointments and creams, balanced to allow of controlled absorption of the active principles. The sulfated fatty alcohols and substances like the wool alcohols, by careful blending with the older types of base, offered great scope for medication through the skin. The preparations in which water constituted the continuous phase have profoundly modified the properties of skin applications, and ointments and creams now offered possibilities for medication in this way which were not available with the older paraffinoid and lard types of base.

He stressed that far from being an impermeable barrier, the unbroken human skin afforded a ready means for the introduction of certain types of medicaments to the blood stream. If a solution of a water-soluble drug such as a sulfonamide were applied to the shaved skin of the rabbit, the sulfonamide could be detected and measured in the blood drawn from an ear vein inside 5 minutes. It might, in fact, be a dangerous procedure to apply preparations of this type over large areas. The application of a 10 per cent sulfonamide cream to a large open wound had on one occasion proved fatal, although a 3 per cent cream had occasioned no trouble. There were great opportunities and fields for research in discovering the possibilities of applying some of these drugs in this way. The sex hormones were already being prepared in this way, and there were commercial preparations on the market.

New Depilatory for Animals

Temporary loss of hair among workers producing neoprene rubber has been attributed to the volatile intermediary polymers of chloroprene, probably the cyclic dimers. According to P. Flesch and S. B. Goldstone (*Science* 113:126, 1951), a single application of these compounds to the skin of animals produces a complete local loss of hair within ten days, with disappearance of the follicles and sebaceous glands and excessive thickening of the epidermis. All these changes are reversible within six weeks. This localized, temporary cessation of hair growth suggests interference with the normal process of keratinization.

Flesch and Goldstone feel that the depilatory fractions of chloroprene polymers open new possibilities in the treatment of fungous infections of the scalp, in studies of hair growth and epidermal carcinogenisis. They point out that the reversible transformation of the thin hairy animal epidermis into the thick hairless epidermis resembling human skin facilitates separation of the epidermis and its use for experimental purposes. Work is being done along these lines.

Trends in Deodorants

In considering new trends in deodorant formulation, D. N. Burton (*Soap, Perf. & Cosmetics* 23:918, 1950) observes that the word "deodorant," as applied to deodorants for personal use, is generally understood to denote the meaning "anti-perspirant." In his opinion the simplest deodorant formulation, and one of the most effective, consists of a buffered aqueous solution of an aluminum salt such as the following:

Aluminium chloride	**20 parts**
Urea	**10 "**
Water	**70 "**

The water can be replaced, if desired, by rose water or artificial rosewater, witch hazel extract, or the like. The number of possible additions is limited by their solubility in the absence of alcohol. Among the substances whose action might profitably be investigated are methyl *para*-hydroxybenzoate, *beta*-phenoxyethyl alcohol, and some of the germicidal quaternary ammonium compounds.

In discussing alcohol-water solutions, Burton notes that cologne deodorants have been marketed both in America and in Europe. Since aluminium chloride and urea are both soluble in alcohol-water mixtures, this type of formula presents no difficulty, and is probably the most effective for a number of reasons. Alcohol is itself an anti-perspirant, a germicide, and therefore a true deodorant and an astringent. It enables the water content to be kept low, so that the wetting of areas intended to be kept dry is minimized, and it makes possible the inclusion of a large number of substances in solution, such as germicides and fungicides. Such physiologically active materials are unhampered by the presence of oils and fats, and can exert a deodorant and antiseptic effect. The finished products after filtration are attractive and pleasant to use, vanishing on application. Cologne deodorant can be used as eau-de-Cologne, and embodies the inherent freshness and summer appeal of this time-honored toilet water. A typical preparation of this type can be made by mixing:

A.

Aluminium chloride	**30.0 parts**
Urea	**10.0 "**
Water, to make	**100.0 "**

B.

Perfume compound, terpeneless	**1.0 part**
Benzyl cresol	**0.4 "**
p-chlor-m-cresol	**0.2 "**
Alcohol, to make	**100.0 parts**

With respect to deodorant creams, Burton notes that the action of physiologically active materials is often inhibited in oily or greasy media and in emulsions, more in water-in-oil than in oil-in-water emulsions. This probably applies to some extent to deodorants. In some emulsion-based deodorants the oily effect achieved is more unpleasant than the perspiration they are intended to combat. Marketed creams appear to be water-in-oil emulsions. The technique of cold cream manufacture can be applied to these products, using a solution of aluminium chloride and urea instead of water, as follows:

Wool wax alcohols	**1 parts**
Cetyl alcohol	**7 "**
Petroleum jelly, white	**32 "**
Urea	**8 "**
Aluminium chloride	**16 "**
Water	**16 "**

ADVANCING THERAPY

Antihistaminics for Colds

The conflicting views on the value of antihistaminics in the prevention of the common cold is well indicated in two recent report. One of these, a report by H. L. Hirsh (*Amer. Proc.* 2:32, 1951) covers a study of 1008 patients treated for the "common cold." Of this number, 517 were treated with tablets of prophenpyridamine (Trimeton) and 491 were given a lactose placebo of identical appearance. Each patient was examined daily for five days. Effectiveness of therapy was based on the following criteria: 1. Objective notations of the severity of findings daily for five days during therapy; 2. The incidence of purulent nasal complications; 3. Subjective expression of the severity of symptoms daily for five days during therapy; 4. Subjective evaluation of effect at the conclusion of therapy.

The data obtained indicate that compared to a placebo, prophenpyridamine administered to comparable groups in an identical manner controls and/or alleviates the symptomatology in patients with upper respiratory infections wherein nasal symptoms are predominant. It is concluded that the antihistaminic, prophenpyridamine, does not completely cure the "common cold," but does alleviate some of the symptoms and, in some instances, shortens the course of the disease by varying degrees.

In contrast are the findings obtained by F. C. Lowell, I. W. Schiller, J. E. Alman and C. F. Mountain (*New England J. Med.* 244:132, 1951). They report that between January 19 and April 18, 1950, 1214 subjects were given one of four antihistaminic preparations as treatment for the common cold. These were, in the order in which they were dispensed; prophenpyridamine Trimeton), pyranisamine maleate (Neoantergan), a placebo (lactose) and thonzylamine hydrochloride (Neohetramine). Information obtained by questionnaire was tabulated on International Business Machine cards and subjected to statistical analysis. They were unable to distinguish any effect of the three drugs, in the dosage used, on the common cold that differed significantly from the placebo.

Vitamin B_{12} for Seborrheic Dermatitis

In the *New York State Journal of Medicine* (50: 1921, 1950), G. C. Andrews, C. F. Post and A. N. Domoukos report the results of adjunctive treatment of 37 cases of seborrheic dermatitis with vitamin B_{12}. The cases were observed for several weeks. Sixteen were apparently cured, 16 were improved, three were slightly improved and in two there was no improvement. Four representative cases are reported in detail. Vitamin B_{12} was given intramuscularly in doses of 10 to 30 micrograms once a week or once every two to three weeks. Local treatment was also given, and sulfonamides or penicillin were also administered when secondary infection of seborrheic areas had set in. Improvement was usually apparent after two or three injections of vitamin B_{12}; recurrences were prevented by a maintenance dose of 15 to 30 micrograms every two to three weeks. The investigators state that recurrences will not appear when other metabolic, endocrine and nutritional factors are appropriately treated, a focus of infection is eliminated and when a low basal metabolic rate is corrected with thyroid extract.

Vitamin C for Prickly Heat

In the early months of World War II, says R. L. Stern (*J. A. M. A.* 145:175, 1951), common prickly heat caused almost universal distress among our troops on some of the constantly hot, humid South Pacific islands. The intense itching, paresthesias and burning interfered with concentration and with sleep, while secondary infection of excoriated areas at times caused temporary disability. The same skin disorder in milder form occurs widely in this country during hot weather, particularly in infants. In attempting to clear or alleviate this disorder in the Pacific, he tried all the available lotions and medicaments of possible aid, changes of clothes and soaps, with no noticeable effects. Large doses of multiple vitamin capsules and vitamin A and D capsules had no effect, but large doses of crystalline vitamin C in tablet form (300-500 mg. daily) gave dramatic relief to most patients. The itching cleared and the rash subsided, usually within half an hour, the effects lasting six to 24 hours.

Subsequently others tried oral vitamin C for the treatment of prickly heat in both adults and children and found it effective. As a result of these and his own experiences Stern states that synthetic vitamin C given orally in large daily doses—500 mg. to adults, 100 mg. to small infants—relieved the itching and paresthesias and cleared the rash of prickly heat in patients on humid, hot tropical islands and in a dry, hot desert area.

New Data on PABA and Gray Hair

Graying of the hair, says C. J. D. Zarafonetis (*J. Investig. Dermat.* 15: 399, 1950) has long been a phenomenon of general interest. Although there is evidence that genetic, hormonal, and nutritional elements may all be involved in the process, the exact mechanism of graying remains obscure. It is not surprising, therefore, that numerous substances have been proposed as "cures" for gray hair. After careful clinical evaluation, however, none of these has survived as a form of therapy for this condition. One compound which experienced this cycle during the past decade is paraaminobenzoic acid (PABA). Pertinent in this connection are the observations made by Zarafonetis on the darkening effect of PABA on the hair of five of 20 patients incident to the use of this vitamin in the treatment of their respective primary deseases. These subjects had received 6 to 24 Gm. of PABA daily. The effect on hair color was first noted six weeks after PABA therapy was begun in one case, but a longer interval was usually required to bring about the change. The effect was not uniform, however, since other patients, who received PABA for comparable periods, failed to exhibit significant change in hair color. There appeared to be no correlation between the darkening effect and the duration of grayness prior to treatment with PABA. The color alteration was observed to occur during the administration of PABA alone. Supplemental vitamin therapy appeared not to influence the effect on hair color in these subjects. It is noted that these patients

were given large quantities of PABA in order to control their disease processes. The amounts used, therefore, were far greater than those employed by others who were deliberately seeking to alter gray hair. The mechanism by which PABA may cause pigmentation of gray hair in certain individuals remains obscure.

Antihistaminics in Burn Treatments

To the expanding usefulness of the antihistaminics may be added a new role in the field of burn treatments. This is indicated in the preliminary report of M. M. Kessler (*Indust. Med. & Surg.* 20:42, 1951). In his studies a group of 30 patients with first and second degree burns were treated with bland ointment and oral antihistaminics. A control group of 30 patients received only the bland ointment. The erythema and edema were diminished in those cases treated with antihistaminics, and the healing time apparently was decreased. Thus, in the group of burns treated with bland ointment and oral antihistaminics, first degree burns responded in all the cases, as evidenced by a decrease in erythema of approximately 75 per cent to 90 per cent. The duration of treatment definitely was shortened; in the second degree burns, the amount of vesiculation was decreased, the tissue oozing was markedly diminished, and the healing time apparently was shortened. The tissue edema surrounding the exposed wound was decreased, implying a definite maintenance of fairly normal vascular permeability. It is felt that the lack of edema encouraged more normal tissue circulation, thereby improving the focal nutritional status. The untreated group presented the usual amount of edema and oozing expectable in a burned area.

ACTH and Cortisone in Skin Diseases

Reports are already available which indicate that pituitary adrenocorticotropic hormone (ACTH) and cortisone may be of value in the treatment of certain dermatological diseases. Among those which seem to be benefited are pemphigus vulgaris, exfoliative dermatitis, urticaria, allergic eczema, psoriasis, disseminated lupus erythematosus, periarteritis nodosa and possibly dermatomyositis and scleroderma. On the other hand, these compounds appear to be ineffective or even detrimental in the treatment of herpes simplex, herpes zoster, varicella, moniliasis, sarcoidosis, acne and hirsutism.

Further evidence of the value of these compounds in the treatment of certain skin diseases is offered in the report of A. B. Cannon and his colleagues (*J. A. M. A.* 145:201, 1951). In summarizing their observations, it is reported that seven patients with pemphigus vulgaris have been treated with pituitary adrenocorticotropic hormone (ACTH) and/or cortisone, with two deaths to date. Five patients are greatly improved, both in their skin condition and in general health. The therapeutic effect has been far more impressive than any we have observed from other forms of treatment. Three of these five patients have never been completely free of lesions, and all have required treatment to prevent relapse. There is little evidence that these hormones have influenced the basic causative factor in this disease.

Practically complete remission of symptoms was obtained in two cases of "pemphigoid" eruptions, but these patients also relapsed and required retreatment. Two cases of epidermolysis bullosa of the congenital dystrophic type were unaffected by these hormones.

Quinidine for Intramuscular Injection

It is pointed out by J. L. Gluck and his associates (*J. A. M. A.* 145:637, 1951) that the need for a satisfactory preparation of quinidine for intramuscular injection in the treatment of disorders of cardiac rhythm has been frequently expressed. In a considerable proportion of patients, the local irritant action of quinidine in the gastrointestinal tract causing pain, nausea and vomiting, and especially diarrhea, is a bar to the use of sufficiently large doses to bring the ectopic rhythm under control. When the oral route is not possible, intravenous administration is usually substituted, but there are risks in the intravenous use of quinidine in cardiac disorders. Quinine dihydrochloride has been used by intramuscular injection, but this produces painful inflammatory induration at the site of injection. Several quinidine preparations offered for intramuscular administration have proved unsatisfactory.

To remedy this situation a 20 per cent solution of quinidine sulfate in propylene glycol was tested for its local irritant effects by intramuscular injection in 19 patients, and in seven of these it was tested for its action on the auricle in auricular fibrillation and flutter. The results show that a single dose of this preparation by intramuscular injection produces negligible local reactions at the site of injection. It produces either no pain or pain of varying intensity but almost invariably of very short duration. In two or three patients who received 12 or more injections at intervals of three to six hours, some swelling of the soft tissues occurred. It subsided gradually and was not associated with pain, redness, induration or slough. The curve of action of quinidine given by intramuscular injection in the form of this preparation is essentially similar to that by oral administration, the peak effect being reached in an average of about three hours, about half of the effect wearing off in about eight hours and the effect disappearing completely in 24 hours or less.

Fumagillin-Amebicidal Antibiotic

A new crystalline antibiotic, designated as H-3 and also known as Fumagillin, has been isolated from cultures of a species of *Aspergillus*. Although it displayed little antibacterial and antifungal activity, M. C. McCowen, M. E. Callender and J. F. Lawlis, Jr. (*Science* 113:202, 1951) found this antibiotic to be an extremely potent amebicide, producing inhibitory effects *in vitro* against a strain of *Endameba histolytica* with mixed bacterial flora in dilutions as high as 1:131,072,000. Following further *in vitro* and animal studies, it was stated that the experimental data indicate that this new antibiotic should possibly be one of the best direct-acting amebicides.

Sensitivity to Parenteral Thiamine

On the basis of 179 unpublished reports of cases of anaphylactic reaction to thiamine injections given by 143 physicians during the past 10 years, C. G. Weigand (*Geriatrics* 5:274, 1950) has come to the conclusion that intolerance to thiamine given parenterally is infrequent but that sensitivity should be guarded against in giving injections after a rest period. The precaution to be taken is to begin with considerably lower doses than were used before and to use the intramuscular rather than the intravenous route. If no untoward symptoms develop, a gradual increase in dosage may be made to an adequate therapeutic level. If any of numerous reactions which Weigand lists do develop following injection of thiamine, no further injections should be given or the greatest caution should be used. Persons suspected of sensitivity may be given skin tests, although it is believed that a positive skin test does not necessarily indicate sensitivity, as thiamine appears to be a substance that produces an obligate wheal.

Studies on ACTH and Cortisone

(*Continued from page 459*)

which are brought about by ACTH and cortisone. I would like to have you think for a moment that ACTH stimulates adrenal hormone production. The adrenal hormones are derived from cholesterol-like substances. It is very likely that in the initial phase of stimulating a large out-pouring of adrenal steroids, one would cause a reduction in serum cholesterol because building blocks are pulled into the adrenal and used as a source of material. On the other hand, the other action of the adrenal steroid once it is liberated is to reduce pituitary activity, and so we have in the initial phase of ACTH treatment the possibility at least of lowering cholesterol because of adrenal hormone formation and raising cholesterol because of the secondary thyroid inhibition. Which one of those will predominate depends upon time and circumstance. However, with cortisone, where there is no need to use cholesterol as a source of adrenal hormone, we are supplying the hormone. The principal action is one of depressing thyroid activity.

We believe that to a large extent the elevations of serum cholesterol which occur in many patients treated for a prolonged period with ACTH or cortisone represent to some extent at least thyroid hypofunction but also bring into this category the relationship of disturbance in cholesterol metabolism which one has to think of in patients with advancing age. The part played by alteration in fat metabolism is illustrated by the effect of a large dose of cortisone on the respiratory quotient and blood ketones and on blood sugar. You can see the shift over from carbohydrate to fat metabolism under ACTH and cortisone treatment.

These are short term experiments. There will be some adjustment of the body as is indicated even within this short period. But the fact remains that the essential action of the adrenal seems to be in part, at least, mobilization of fat, utilization of fat, and in addition a rise in serum cholesterol which is an interesting aspect of this whole problem of treatment.

Before concluding the thyroid picture we might say that the adrenal activity is also modified by thyroid activity. With myxedema, it is extremely difficult to stimulate the adrenal gland of a hypothyroid patient. In other words, perhaps the myxedema of the adrenal prevents the ACTH from causing its usual response. One of the failures for ACTH treatment may be hypothyroidism, and in the long continued case of ACTH treatment it is entirely possible that limited reaction may occur as this physiological hypothyroidism develops. How much the action of cortisone itself depends upon normal thyroid activity in the body is a more difficult problem and we cannot answer that definitely at this time.

We know that ACTH and cortisone antagonize the action of insulin but that in most patients we gain the impression that ACTH and cortisone stimulate the production of insulin. In other words, we rarely see diabetes in patients with cortisone and ACTH. When we do, we rather think that these patients have a diminished reserve function of their islet cells, and that in ACTH or cortisone period of treatment we have an excellent way of detecting early diabetes. I would go so far as to say that a patient who shows a diabetic trend after 48 or 72 hours of adequate ACTH or cortisone treatment might very well be an early potential diabetic which is picked up by a mechanism even more sensitive than the glucose tolerance test. This merely shows one of the few patients we have observed on ACTH who had no evidence of diabetes beforehand, who on ACTH treatment developed diabetes. Diabetes is not a contraindication to the use of these hormones, but it must be considered very seriously because it does alter insulin requirement.

Now the problem in the aged seems to me to be one primarily of trying to mobilize these older people. A patient who is kept in bed because of a sore joint, because of a fall and injury, will become stiff, will become incapacitated, and you know if that patient can be mobilized, the nursing care, the medical problem, the patient's morale are all improved tremendously.

I like to think of ACTH and cortisone as offering some possibility in short-term therapy and I like to limit this in periods of 5 to 10 days. What can we do in periods of 5 to 10 days in patients in the older age group who have no fracture and no contraindication to early mobilization? To patients who have bursa or joint trouble of a more acute nature, to patients who have thrombophlebitis or are incapacitated temporarily with a severe allergic asthma, to some of the patients who are getting secondary infections from chronic skin disorders where it is possible to modify the skin reaction for a short period of time with the use of ACTH or cortisone, and some of the patients who present real problems in surgery, the tonic effect of cortisone cannot be underestimated. It has a euphoric effect. It increases appetite and as such one has a great opportunity to mobilize these people if the hormone is used carefully with discrimination for a short period of time. Glycogen reserves in the liver are increased. The patient's capacity to undergo surgery is greatly increased.

Most of you are familiar with the acute inflammatory diseases of the eye as being also another action of these hormones, either systemic or local, which can be utilized to rehabilitate these patients.

We see a good many people with so-called osteoarthritis, a patient where you cannot change the spur, you cannot change the bone or the bone pathology. But if a patient has an undue amount of inflammatory reaction of any cause, you have the hope of modifying that inflammatory action by the use of ACTH and cortisone. Where a patient is immobilized in bed because of such a reaction, the rehabilitation, the improvement in general tissue structure which occurs following that is worth trying. On the other hand, I feel that one should embark on this only as a short-

(*Continued on page 530*)

YOUR TRADE-MARK RECORD

by John H. Graham
International Patent and Trade-Mark Consultant

There's a Treasure Chest of Trade-Marks—in Employee Contests!

The question of how to go about choosing a good trade-mark for a new product is always difficult to solve.

Some resort to a "take it to the wife's Bridge-Club" approach; others abandon all to lay the problem before advertising experts; another group sweat it out with their top personnel; salesmen, advertising chief, and management. All of these methods have merit in that they produce a series of different thoughts on the same subject which can result in a good representative mark.

Unless the man is a genius at "picking 'em," no one person can go on devising new marks for new products which have the snap, imaginative interest and appeal needed in order to make the mark a distinctive tribute to the product.

There is one way of bringing into existence a large group of interesting trade-mark suggestions which is overlooked. It has from time to time been employed with excellent success since it brings out from the very people involved in the production of the new product their ideas as to what the right name shall be. This method of "audience participation" is the employee contest.

The functions of such a contest are mainly to get the reaction of the people handling the product not only as to how good it is but also as to what they think it should be named.

Many firms who deal with cosmetics, toilet goods and perfumes rely for testing on their employees. A new cream will be handed out to all—for their reaction as to its qualities.

How rarely, though, do the same employees get a chance to say what they would call it—whether fair or foul.

This idea, like many other radical proposals, can readily be overdone. But it serves as a periodic boost to employer and employees alike.

As an example of what is the employer's part in this program it is attributed to the old Eastman Co. that their trade-mark "KODAK," perhaps one of the best known trade-marks in the world, was obtained by an employee contest. The rules were that the marks submitted should have a double sound and be harsh or "popping" when spoken so that they would audibly strike the hearer. What other rules were set out are unknown to us but in substance they could be: the mark should be easy to read; easy to say; well balanced and clear; and easy to apply to advertising copy.

The advantages of using this medium of obtaining a selection of marks to mull over are many. First, such company sponsored contests make even the lowliest workers feel they belong. Second, there is a feeling of cooperation between employees—and of competition—even when the jokesters take over. Third, the employee approach is from a new point of view—they have handled packed and generally rubbed up against this new product. They may have gone home and told their families all about it *including* the "pet name" given by the research and production workers. These pet names are sometimes wonderful—some ex-co-workers of mine may remember our GLIT during World War II!

All in all, such a program, repeated occasionally, will reap a good harvest from all views, including employee-employer relationships, interest in the company's products, and last but not least, a list of marks from which to choose.

Prizes are usually awarded. The winner may not produce the mark as finally adopted since you will wish to search the selected marks to make sure the field is clear and perhaps will want to consult your advertising experts before adopting the mark.

The rules and regulations are easily set up to suit your own formula. The manner of operation is also a simple but specific matter to suit your requirements. Certainly, however, you are bound to gain something in the long-run and may even unearth a hidden talent for appreciation and expression from someone whom you never thought had it in him.

And as long as you are careful in your rules to make it clear that it is only an intra-mural contest and you are not obligated to take any mark, even the prize-winning one, there will be no recoil in the future.

And when you walk through the research lab. one day and someone says, "Hey, Doc! We've a beauty for this new cold-cream."—You will either laugh with them at their joke, or politely take it under consideration, or suddenly see you have a mark with all the earmarks of distinction. In any case, it can be fun for all—we all like a contest!

The following Trade-Marks were recently published in the Official Gazette of the United States Patent Office.

Vanitray—22—R—594,244
Bennington Brush Co., Bennington, Vt.
Ser. Mar. 20, 1950 D. U. Mar. 3, 1950

Wahl—44—R—591,161
Wahl Clipper Corp., Sterling, Ill.
Ser. Mar. 17, 1950 D. U. July 1, 1913

POINTERS ABOUT PYRIDOXINE

You can count on Roche for ample supplies of pyridoxine hydrochloride. At Roche Park, where vitamins are made by the tons, this important vitamin is available in quantity so that your order for any amount will receive prompt shipment. And Roche pyridoxine is such high quality that it may be used safely in parenteral solutions.

SPECIAL NOTE: It is acknowledged that the need for pyridoxine in human nutrition has been established although no minimum daily requirements have been determined.

B6

Make Roche headquarters for:
Ascorbic Acid
Riboflavin
Sodium Ascorbate
Biotin
Thiamine Hydrochloride
Thiamine Mononitrate
Pyridoxine
Panthenol
dl-alpha-Tocopherol unesterified
dl-alpha-Tocopherol Acetate
Vitamin A acetate synthetic
Vitamin A palmitate synthetic

ROCHE

COURTEOUS SERVICE

CALL 'ROCHE' FOR VITAMINS

VITAMIN DIVISION
HOFFMANN-LA ROCHE INC.

NUTLEY 2-5000
NUTLEY 10, NEW JERSEY

In Canada: Hoffmann-La Roche, Ltd., Montreal, Que.

ABREAST OF THE MARKETS

MARKET LEVELING OFF SLIGHTLY; BOTANICALS QUIET; OILS CURBED BY CEILINGS; CHEMICAL DEMAND IS UP

For the first time since the beginning of the Korean war when prices shot up suddenly, the market has become rather stable, with scattered adjustments in individual oils and botanicals, according to the respective dealers. Chemicals and war-emergency items such as alcohol and glycerine were, of course, still very tight toward the end of March. A relaxing in the demand for these items appeared possible in the future if there should be a stalemate or truce in the Eastern war, following the Communist spring offensive which was being prepared in early April. On the grimmer side, however, was the prospect of even more severe shortages and a more stringent economy if the Korean uprising should flare up into a world war, as was remotely suggested by the pronouncement of non-Chinese troops having joined the Red forces, and the granting of permission to the U. N. forces to bomb Manchurian bases if Russian planes join the battle.

There was a wide variation in the essential oil market, with some dealers having to withdraw a number of essential oils because they could not pay the higher replacement costs which had risen above their ceiling figures. A partial list of those items which were in short supply late last month includes California lemon oil, lemongrass oil, balsam copaiba, Ceylon and Java citronella oils, lavender oil, pimento leaf oil, spruce oil, and clove oil.

Other dealers reported their ceiling prices well adjusted and that their stocks on hand were large enough to see them through five or six months. By that time they believed they would receive some type of relief, either in a relaxation of the ceiling or some other device. All in all, the essential oil houses seem to overlap in their stocks, with most items readily available. The chief complaint among the dealers is that many of the transactions take an enormous amount of paper work before they are completed. One case in particular is that of the citrus oils.

The California exchange reported earlier this year that there would be ample material on hand to satisfy all normal orders for 1951, but they would not be able to promise any definite date of delivery. As a result, the dealers had to apportion their stocks evenly among the consumers, asking them to be content with smaller quantities of the oils for the present, until more stocks were available. In other cases the dealers had to write back and forth several times to their customers advising them of frequent changes in ceiling regulations or other data.

By the end of the month the Essential Oil Association of America had submitted a request for relief to Washington and was still busy trying to arrive at some possible solution which would ease the condition without disturbing the equilibrium of the market.

The most direct way to control prices of the imported essential oils and botanicals would be to appeal to the foreign growers and shippers by asking them to keep their prices down voluntarily. But this solution is next to impossible because the exporters will keep their prices up just as long as they can do business at the higher levels. The rehabilitated European countries constitute a large factor in making these higher prices possible, for they continue to use their Marshall Plan dollars to buy the high-priced goods, whereas if they had to spend their own money, they would be more judicious in their buying habits. In other words, if the foreign exporters find the American market closed to them because of lower ceiling levels, they can continue to sell to other countries of the world. The only question in this case would be how long the European and other countries could continue to import these items until their saturation point had been reached —and at the same time—how long consumers in the American market could postpone replacing those commodities which had advanced over the ceiling prices, without resorting to substitute items, or to the inevitable black market.

It has also been suggested that, in order to allow for the higher replacement costs on imported items, dealers in this country be allowed to advance their spot prices. This would mean they would be able to increase the selling prices of those imported items whose replacement costs were higher, and they would be able to increase the costs in such a way that they would always maintain the same degree of profit on each individual item. This would also mean that a ceiling price would exist in name only, since its elasticity would enable it to be pushed higher and higher, following the individual advances in replacement costs. As a result, the consumer would have to absorb these price increases, and in turn pass them on to the housewife in the form of higher food costs, for example, where essential oils and botanicals are used for flavoring purposes.

The botanical field has also become relatively stable since the price ceilings went into effect in January, and while the end result is very similar to that existing in the essential oils, the reason behind the development appears to be just the opposite. While ceilings are hampering essential oil buyers and shortages are apparent, the botanical field on the other hand is sluggish because of the presence of large stocks. As a result of the frantic buying last year when the Korean war began, it appears that consumers are only now beginning to dip into these greater-than-normal supplies and are naturally not very eager to re-enter the market now that prices are at such a high level. As a result the well stocked consumers, as far as botanicals are concerned, are postponing their purchases as long as possible.

As far as the chemical market is concerned glycerine and alcohol continue to be tight, although the extremely heavy demand of the last few months has fallen off slightly. In the

(*Continued on page 522*)

• Prices quoted in this section were current on the first of this month.

Jasmin

Rose

CAMILLI, ALBERT & LALOUE, S. A.

Grasse, France **Established 1830**

ABSOLUTES

BROOM (Genet)
CARNATION
CASSIE ANCIENNE
CLARY SAGE
EVERLASTING (Immortelle)
JASMIN Maximarome
JASMIN Pommades
JASMIN Chassis
JASMIN Benzol
LAVENDER Maximarome
MIGNONETTE
MIMOSA Maximarome
MOUSSE D'ARBRE Maximarome
MOUSSE D'ARBRE Colorless
NARCISSUS of the Plains
NARCISSUS of the Mountains
OAKMOSS YOUGOSLAVIAN
ORANGE Maximarome
ORRIS
ROSE DE MAI Maximarome
TUBEROSE Maximarome
TUBEROSE Pommades
VIOLET LEAVES Maximarome
YLANG YLANG A

Above Natural Perfumers' Materials Stocked by Our American Affiliate

CAMILLI, ALBERT & LALOUE, INC.

14 EAST 48TH STREET **NEW YORK 17, N. Y.**

Cable Address: MAXIMAROME New York
Telephone PLaza 3-6070

MYSORE GOVERNMENT Sandalwood ~~ Oil ~~

Distilled from
Santalum Album

{ INSIST ON ORIGINAL CANS AND CASES }

Sole Agents for the United States
In Canada: *Sole Agents*
W. J. BUSH & CO. (*Canada*) Ltd. Montreal

W. J. BUSH & CO.

(Incorporated)
Essential Oils
New York

Chicago National City, Calif. Montreal

Greeff

PROGESTERONE U.S.P.
(Crystalline)

TESTOSTERONE U.S.P.
(Crystalline)

TESTOSTERONE PROPIONATE U.S.P.
(Crystalline)

Natural Estrogenic Substances

R. W. GREEFF & CO., INC.
10 ROCKEFELLER PLAZA, NEW YORK, N. Y.
TRIBUNE TOWER, CHICAGO, ILLINOIS

Fine Chemicals

BPC

PHARMACEUTICAL CHEMICALS

AMINOACETIC ACID
AMINOPHYLLINE
BENZOCAINE
CHINIOFON (YATREN)
CHLORBUTANOL
CINCHOPHEN
8-HYDROXYQUINOLIN
IODOXYQUINOLIN SULPHONIC ACID
NEO CINCHOPHEN
OXYQUINOLIN BENZOATE
OXYQUINOLIN SULPHATE
POTASSIUM OXYQUINOLIN SULPHATE
PHENOBARBITAL
PHENOBARBITAL CALCIUM
PHENOBARBITAL SODIUM
PENTOBARBITAL SODIUM
THEOPHYLLINE

INTERMEDIATES

BENZYL CYANIDE
BENZALDEHYDE
ETHYL CYANOACETATE
PHENYL ACETIC ACID
8-HYDROXYQUINOLIN-5-SULPHONIC ACID

AROMATIC and FLAVORING CHEMICALS

DIACETYL

BENZOL PRODUCTS CO.

237 SOUTH STREET NEWARK 5, N. J.

MERCURY DECLINES, DOMESTIC MINES REOPEN; DEMAND FOR GLYCERINE MORE NORMAL; WAXES, VANILLA BEANS SLUGGISH

Following the recent advances of quicksilver, the price of the metal declined somewhat during March from $220 to $215, with the upper side of the range extending to $225, depending on the dealer. Some metal has been arriving from Spain, amounting to about 2500 flasks during the latter part of March. Along with this supply, it is reported that American mines, which had been closed down for a large part of last year, are beginning to reopen. The Bureau of Mines reports that the production of quicksilver in the United States last year fell to the lowest rate it has reached in 100 years, while imports into this country were of considerable magnitude.

Italy has not entered the market for quite some time and has shown no intention up to the present time of exporting any metal to foreign countries. It is not known at this time what effect the opening of the U. S. mines will have on the price of the metal, nor whether Italy's abstinence from selling in the market will tend to keep the price of the metal up.

Less Demand for Waxes

Although candelilla wax remained at 71c last month, Mexican dealers were reported planning to seek higher prices. This, of course, would not affect the domestic price of the wax as long as the ceiling remained at that figure, although it may curtail future imports.

Carnauba, Japan, and ouricury wax all declined in price during March because of a marked reduction in demand. As in other commodities, the heavy buying of several months ago is now keeping the wax consumers out of the market, since they feel the prices are too high and they have sufficient stocks on hand to wait and see what develops in the future. Carnauba No. 1 was set at $1.30, carnauba, North Country No. 3, at $1.21, Japan, at 58c, and ouricury, at $1.03.

Vanilla Beans Quiet

Bourbon vanilla beans and Mexican whole beans were shaded about 25c last month, with little activity reported in the market. The bourbons range from $3.50 to $4.00 and the Mexican beans, from $6.25 to $7.00.

The United States imported 2,312,000 pounds of vanilla beans in 1950, valued at $6,449,000, according to the Census Bureau, U. S. Department of Commerce. This amounted to about twice as much as was imported into this country in 1949, and greatly exceeded the entire world production of vanilla beans in 1950. The carryover stocks of vanilla beans in producing countries, therefore, declined considerably, the major areas of supply being in Madagascar and Mexico.

Total United States imports of vanilla beans increased from a prewar (1935-39) annual average of 1.0 million pounds to 1.1 million pounds in 1948, 1.2 million pounds in 1949, and 2.3 million pounds in 1950. The average import valuation per pound increased from $2.50 in prewar years to a peak of $5.90 in 1947, and then declined to $4.75 in 1948, $2.95 in 1949, and $2.80 in 1950.

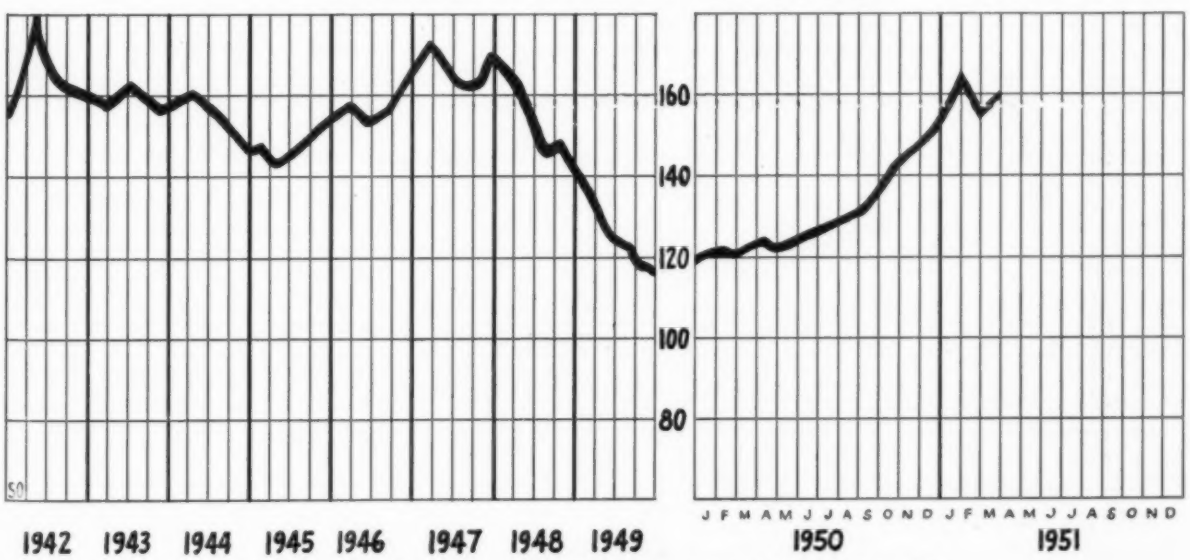
The accompanying table represents the imports of vanilla beans from the producing areas to the United States, comparing the figures of the last three years with those of the pre-war years. The 1949 and 1950 figures are preliminary.

Glycerine Demand Steady

Sales in glycerine have returned to a more normal rate, following the frantic tempo of buying during the latter part of 1950. Demand for the refined mate-

Origin	Average 1935-39 1,000 lbs.	1948 1,000 lbs.	1949 1,000 lbs.	1950 1,000 lbs.
Madagascar	193	204	640	1,683
Mexico	223	663	332	279
French Pacific Islands	43	113	96	162
Indonesia	21	8	24	90
French West Indies	17	4	14	45
Leeward and Windward Is.	—	31	55	27
Other	509	53	20	26
Grand Total	1,006	1,076	1,181	2,312
Total Value	$2,502,628	$5,123,614	$3,490,742	$6,448,802

50 Raw Materials—Weighted Price Index. 1926 = 100.



The price index of fifty commodities for March advanced from 153.0 to 160.2.

MARCH PRICE CHANGES

UP

Anethol 23c
Balsam Copaiba S. A., USP 25c
Balsam Peru 20c
Benzaldehyde 10c
Benzophenone 10c
Benzyl Alcohol 5c
Benzyl Salicylate 10c
Caraway Oil $1
Cascara Sagrada 3c
Cedar Wood Oil 10c
Cinnamic Aldehyde 4c
Citronella Oil, Ceylon 30c
Clove Oil 40c
Cod Liver Oil USP 10c
Grape Fruit Oil 50c
Heliotropin 20c
Iso Eugenol 43c
Lemon Oil, Calif. 50c
Italian $1.50
Lime Oil, Dist. 50c
Linalool 45c
Methyl Anthranilate 50c
Methyl Benzoate 15c
Methyl Cinnamate 11c
Musk Ambrette 20c
Musk Ketone 15c
Orange Oil, Amer., Cold Pressed 25c
Amer. Dist. 10c
Papain, Pure 55c
Peppermint, Natural 60c
Redist. 50c
Petit Grain Oil, S. A. $1
Senega Root 10c
Senna Tinnevelly 2c
Wormseed Oil $1

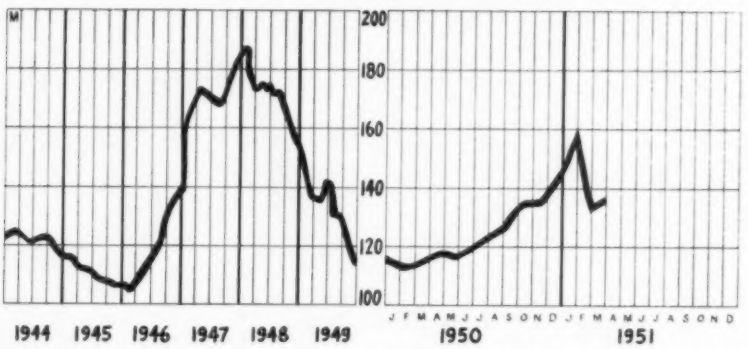
DOWN

Carnauba Wax #1 5c
North Country #3 10c
Cinnamic Alcohol 30c
Cocoa Butter 4c
Coriander Oil $6
Cubebs Oil $1.25
Eugenol 5c
Japan Wax 2c
Menthol 75c
Mercury $5
Ouricury Wax 6c
Rhubarb Root 10c
Vanilla Beans, Bourbon 25c
Mex. Whole 25c

rial is being controlled by the producers themselves who are limiting sales to customers so as to spread the available supply of glycerine over a wider range. Government DO orders have not cut into production yet, according to one report, which indicated that arsenals throughout the country are placing their orders with various dealers, rather than with a selected few, in order to spread the load.

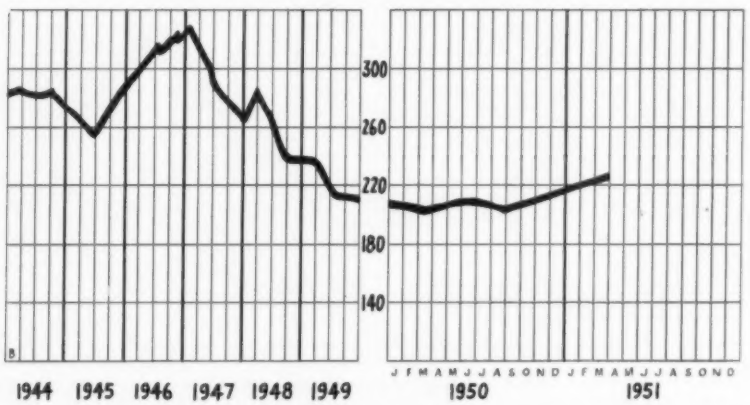
The supply of glycerine is very tight, however, since the demand is staying close to the rate of production. It is not known at this time what effect the European purchases of Argentine glycerine will have on the available supply in this country. A large part of the crude glycerine produced in Argentina is being sold to Europe, with the result that half as much material will enter the United States from this source in 1951 as in 1950. Another factor, expected to offset the smaller Argentine exports somewhat, is the anticipated increased production of domestic synthetic material.

15 Medicinal Chemicals—Weighted Price Index. 1926 = 100.



The medicinal chemicals index advanced slightly from 131.5 to 135.6. Cod liver oil went up; menthol and mercury went down.

15 Botanicals—Weighted Price Index. 1926=100.



The botanicals index advanced from 222.4 to 227.3. Cascara and senna were higher; rhubarb was lower.

Market Leveling Off Slightly

(*Continued from page 519*)

case of alcohol, reports have been received to the effect that some molasses contracts have not been renewed, a devlopment which may cut down on the end supply of alcohol. Quicksilver prices fell off to $215 by the end of March, with more imports arriving from Spain, but none from Italy. Domestic mines had begun to reopen after almost a year of inactivity.

The next few months may serve to clarify world conditions to some extent and help determine what action to take in making replacements from foreign sources.

Orange Oil Tight

The price of orange oil was advanced 25c for the California cold pressed material and 10c for the distilled toward the end of March, with the quotations being $2.50 and $1.10 respectively. Supply of the oils was extremely limited, and dealers indicated that sales were subject to their acceptance in most cases. The Florida oil has been very scarce the producers of the frozen juice having given up the essential oil end of the business last year. In spite of the high price of the oil, there has been no concerted return to its production on the part of the Floridian producers.

Cod Liver Oil Higher

Norway has advanced cod liver oil by 10c to the range between $2 and $2.10, with future price movements depending on the outcome of the fishing season now under way. If the yield of cod liver oil is large, the price will probably fall off, and if small, it will advance. Iceland is quoting the oil at a slightly higher figure. The sale of this commodity is not controlled by the ceiling price regulations in the United States.

Papain Price Up, Production Down

Because the usual producers of papain have turned their backs on this botanical for the sake of more lucrative jobs, less material has been arriving in this country from the origin. The price has gone up by more than $3 since last year at this time and is now quoted anywhere from $5.50 to $6.25.

Ipecac Root Getting Scarce

Ipecac root is expected to advance sharply in the near future owing to lack of supply from Columbia. A reliable source of information has indicated that collectors of the root in the interior of the South American country have been harassed by bandits while at work in the fields. These workers have fled to the relative safety of the cities in Columbia, abandoning the botanicals, thereby reducing the production of the root.

Bergamot Oil Remains Strong

Most dealers reported bergamot oil between $7.30 and $8.00 last month, with one source going as high as $9. Importers were still awaiting word from the Consortium in Italy as to future prices of bergamot. Word was received to the effect that demand for the oil in other countries exceeded the available material in Italy, with the result that the Consortium may increase the price of bergamot further.

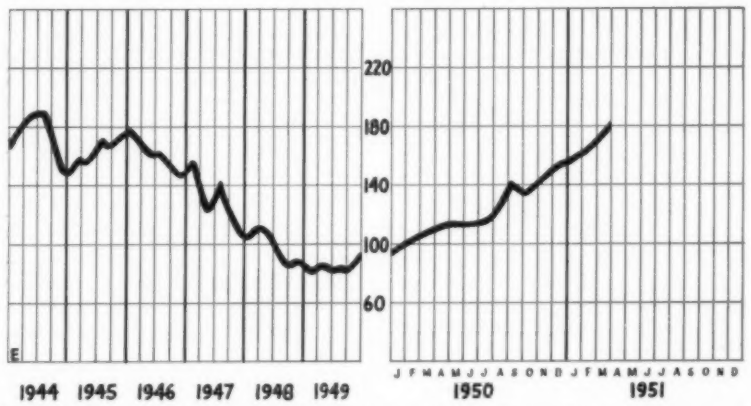
Other sources indicate that the Consortium is hesitating to advance the oil prices, realizing the sales to the United States would fall off if the quotation exceeded the ceiling price.

Clove Oil Higher

Clove oil advanced 40c last month to be quoted from $3.25 to $3.50. Not much oil is available on spot, with some dealers intimating that the cost of distillation of new material is too great in view of the ceiling prices.

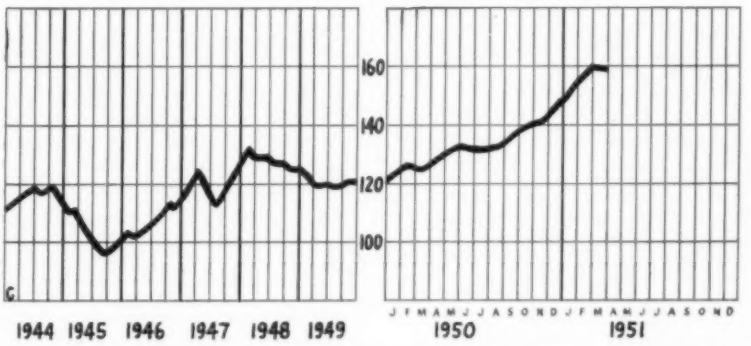
According to the an annual report for 1950 issued by the government of Pemba, Zanzibar, the clove plantations are still facing a serious threat from the disease, "sudden Death." The survey pointed out that the number of apparently healthy trees which would have to be felled under the proposed control plan had increased so abruptly that the project had been abandoned. Recent work, according to the Director of Clove Research, has been confined mainly to attempts at solving the cause of the disease.

15 Essential Oils—Weighted Price Index. 1926 = 100.



The essential oils index went up from 169.8 to 183.7. Citronella, clove, lemon, and peppermint oils were higher.

25 Cosmetic Raw Materials—Unweighted Price Index. 1926 = 100.



The cosmetic raw materials index fell off slightly from 159.6 to 159.2. Balsam Peru went up; Japan wax and menthol went down.

Citronella Oil Higher on Replacement

Ceylon citronella oil went up to $2.75 in March, which was 10c higher than the Java oil, contrary to the normal relationship between the two oils. The long-range outlook on citronella oil may be improved by the essential oil industry in Guatemala, which, according to *Foreign Commerce Weekly*, is expected to expand. According to this source, 1,103,000 pounds of citronella oil (Java type) were exported from that country in 1950. It is estimated that 1951 citronella oil exports will be about 2,000,000 pounds.

Guatemala exported 177,285 pounds of lemongrass oil last year and is expected to account for about 400,000 pounds in 1951. There were some 60 cultivator-distillers of these grasses in 1950, with the number expected to increase to 100 in 1951.

Lemon Oil Tight

California lemon oil went up to $4.75 last month, while the Italian oil was as high as $5.50, with some sellers quoting $8.00. There was very little oil available, and new crop oil has not yet appeared on the market. The Italian oil was also very limited, with offerings from the source being scattered and meagre. With consumer interest expected to increase now that the spring season is well under way, it is hoped that replacements will become more readily available.

No change in Alcohol

Single drum prices of Special Denatured alcohol No. 1 remained at 90c in March, with no change in the tight supply.

The Alcohol Tax Unit Bureau of Internal Revenue, Treasury Department released data last month on the supply, production, withdrawals, and stocks of ethyl, completely denatured and specially denatured alcohol during the month of January, 1951, as compared with January, 1950, according to the following table:

Production

	Proof gallons	
	1951	1950
Ethyl	41,466,085	24,687,773
*Completely denatured	75,048	107,146
*Specially denatured	17,763,864	14,663,480

Withdrawals

	Wine gallons	
	1951	1950
†Ethyl, tax paid	5,079,568	2,749,731
tax free	27,476,904	27,720,659
*Completely denatured	64,819	249,011
*Specially denatured	19,275,475	14,951,256

Stocks

	Gallons	
	1951	1950
†Ethyl	54,760,857	31,272,721
*Completely denatured	45,723	435,647
*Specially denatured	1,557,886	3,028,756

*Proof gallons. †Wine gallons.

PERFUMER'S SHELF

Carvone in Essential Oils

In discussing the determination of carvone in essential oils, C. Schooltens (*Pharm. Weekbl.* 85:738, 1950) states that considerable variations are found in the results obtained by different analytical methods. Using a mixture of 65 per cent of pure carvone with 35 per cent of limonene, assays were performed by seven different methods with, generally, low results. The U.S.P. process gave results ranging from 56.7 to 58.5 per cent; that of the British Pharmacopoeia from 60.3 to 63.9 per cent; the sulphite method of the National Formulary VII gave 64.5 to 65.9 per cent. The latter method is thus to be preferred. Gravimetric determination with 2:4-dinitrophenylhydrazine is fairly satisfactory; results being from 63.7 to 66.0 per cent.

Oil of Picea Mariana

According to the report of A. C. Shaw (*Can. J. Research* 28B:268, 1950), the foliage and terminal branches of *Picea mariana* distilled with steam at 90 pounds pressure for eight hours gave 0.461 per cent of an oil with the following properties:

Specific gravity	**0.9085**
Index of refraction	**1.4696**
Specific rotation	**-32.10**
Saponification number	**119.7**
Saponification number, after acetylation	**123.3**
Acid value	**0.44**
Aldehyde content, as citral	**0.3 per cent**
Ketone content, as carvone	**1.0 per cent**

The approximate composition of the essential oil from the needles of *Picea mariana*, as estimated from the distillation data, is given as follows in percentages: 2.5 santene, 1 tricylene, 16 *l*-alpha-pinene, 10 *l*-camphene, 6.5 *l*-beta-pinene, 3.5 myrcene, 5 d-delta-carene, 6.5 *dl*-and *l*-limo-nene, 1 terpenolene, 1 *l*-borneol, 1 unidentified alcohol, boiling at 219°C., less than 0.5 unidentified alcohol boiling at 120°C., 1 compound related to *l*-cadinene, and 10 residue and loss.

Imitation Flavors for Masking Distasteful Drugs

The usefulness of some imitation flavors for masking the unpleasant taste of drugs, like ammonium chloride and quinine hydrochloride, is indicated in the reports of B. L. Lankford and C. H. Becker (*J. Am. Pharm. Assoc.*, Scient. Ed. 40:77 and 83, 1951). They point out that many different flavored syrups are official for masking obnoxious-tasting drugs. However, the majority are unsatisfactory. It was felt that there is a need for flavored syrups prepared from imitation concentrates since these would be more consistent and standard, less costly, and more easily obtainable. These would provide a greater variety of flavors than the official ones from which the physician could choose according to the desires of the patient, and which also would be more desirable for children.

The first of their reports gives the results of an investigation made to determine the relative efficiencies of some imitation flavor concentrates actually prepared from the basic ingredients as masking agents on the initial and obnoxious tastes of ammonium chloride. These were compared to some of the official flavored syrups recognized as good masking agents for saline drugs. Results show that some imitation flavored syrups were as good as the official syrups used, and in some instances superior. The imitation fruit-flavored syrups, as such, were poor masking agents for the salty taste of ammonium chloride. The addition of citric acid to these syrups greatly enhanced their masking powers, and they were found to be among the best.

Raspberry syrup, N. F., imitation raspberry syrup, acid added, imitation wild cherry syrup, acid added, imitation grape syrup, acid added, cacao syrup, N. F., cherry syrup, N. F., imitation maple syrup, and glycyrrhiza syrup, U. S. P., were found to be the best for masking the initial salty taste of ammonium chloride. Not any in this group could be considered better than the other. Imitation cream soda and imitation maple syrups were the most effective imitation flavored syrups for masking the obnoxious taste of ammonium chloride. Glycyrrhiza, raspberry, and cacao were the official syrups found as effective for masking the obnoxious taste.

In their second report, Lankford and Becker state that cacao syrup, N. F., was the best of all vehicles at level of significance used for disguising the bitter taste of quinine hydrochloride. Most of the imitation flavored syrups were equally as effective disguising agents as the other official syrups used in this investigation. The addition of citric acid to the imitation fruit-flavored vehicles did not appear to increase the disguising potentials of these syrups. Aromatic eriodictyon, cacao, and glycyrrhiza syrups were the best at level of significance used of the official syrups for disguising the obnoxious taste of quinine hydrochloride. Equally effective of the imitation syrups were coconut, wild cherry, with and without acid added, and raspberry syrup, acid added.

Constituents of Iris Oil

In a report on a few constituents of essential oil of iris, W. Treibs (*Chem. Ber.* 83:431, 1950, through *Perf. & Essent. Oil Rec.* 41:356, 1950) describes several ketone products or alcohols which he had traced, together with eugenol and irones, in the essential oil of iris. The ketones are extracted as oxime phthalates and the alcohols as boric esters. He isolated a certain number of products which were identified and previously described by Naves in 1949. These were ketone $C_{10}H_{16}O$, of which the semicarbazone melts at 165-166° eugenol, acetophenone, acetoveratrone (dimethoxy-3:4-acetophenone) and a hydroxyketone $C_{14}H_{24}O_2$ related to the irones.

Treibs also found two ketones, $C_{10}H_{16}O_2$, one of which possesses an unpleasant odor, and gives a semicarbazone melting at 151-152°, while the other smells of carvone, the nonene-2-al-1 (semicarbazone melting at 165.5-166.5°). Also reported were a secondary alcohol, $C_{15}H_{26}O$; two secondary alcohols, $C_{10}H_{16}O$, the ketone corresponding to the first giving a semicarbazone melting at 226°; an irol, $C_{24}H_{14}O$, the corresponding irone giving a semicarbazone melting at 153-154°.

The answer to that is simple: W
forty-eight States, there is where
go is not so simply answered. In fa
and economy of an order's dispa
stipulations, carrier-availability, chara
and many others. Thus, to make quick
for the multiplicity of orders that daily
these experts we have. Those in charge
men long experienced in the handling and
faction that has come to be an expected
their unerring judgment in speeding each da
most advantageously.

CREATORS of MADE-TO-ORDER FRAGRANCES
for PERFUMES, TOILETRIES and COSMETICS

•

ODORANTS and DEODORANTS for INDUSTRIAL and TECHNICAL USE

•

SUPPLIERS of AROMATIC CHEMICALS, BASIC
PERFUME and FLAVOR RAW MATERIALS

•

FRITZSCHE *Established* 1871
Brothers, Inc.

PORT AUTHORITY BUILDING, 76 NINTH AVENUE, NEW YORK 11, N. Y.

BRANCH OFFICES *and* °STOCKS: *Atlanta, Georgia, Boston, Massachusetts,* °*Chicago, Illinois, Cincinnati, Ohio, Cleveland, Ohio,* °*Los Angeles, California, Philadelphia, Pennsylvania, San Francisco, California,* °*St. Louis, Missouri,* °*Toronto, Canada and* °*Mexico, D. F.* FACTORY: *Clifton, N. J.*

HEY GO

OM HERE ? . . .

The answer to that is simple: Wherever there's a customer, in city or town in all the forty-eight States, **there** is where **FRITZSCHE** oils and aromatics will go. But **how** they'll go is not so simply answered. In fact, considerations that determine the speed, efficiency and economy of an order's dispatch are many and varied. They include customer's stipulations, carrier-availability, character of goods, size and weight of individual units, and many others. Thus, to make quick, on-the-spot decisions that insure proper dispatch or the multiplicity of orders that daily leave our plant is a job for traffic experts. And ese experts we have. Those in charge of our Order and Shipping Departments are long experienced in the handling and routing of merchandise and much of the satis- n that has come to be an expected part of **FRITZSCHE** service can be traced to nerring judgment in speeding each day's orders to their respective destinations vantageously.

SOME TIMELY POINTERS ON THE PROPER STORAGE OF DELICATE OILS . . . .

PURE aromatic oils in first class condition when packed will retain their fine quality for long periods of time if, upon receipt by the customer, they are properly handled and stored. An impure oil which has already started to deteriorate when packed may spoil quite rapidly even under the most carefully controlled conditions. It is, therefore, most important to start with a reliable grade of oil and then apply certain basic precautions to insure the preservation of its fine quality and aroma over long periods. As an aid to users of these products, we suggest the following general rules for proper storage:

1. **Store only in well-filled, tightly stoppered containers. This will help to prevent oxidation and evaporation of the oil.**

2. **Use only glass, heavily tinned, stainless steel or earthenware containers to prevent contact with metals which may accelerate deterioration of the oil.**

3. **Use only dark colored bottles to protect the oil from sunlight. Oils stored in carboys, generally made from clear glass, are protected by the hood placed over the carboys. It has been found that sunlight has a definite catalytic action, therefore, if traces of metals or moisture are in the oil, rapid deterioration may result upon exposure.**

4. **Store at uniform temperatures. A uniform temperature is just as important as a proper temperature; continual changes hasten spoilage of the oil. Temperatures too low may cause separation of the constituents of the oil; conversely, high temperatures accelerate changes. The subject of correct temperature is still controversial, but experience has shown that, with few exceptions, a temperature maintained at 68-70° F. is best for essential oils.**

5. **Always store away from steam pipes or heating units.**

6. **Always store away from direct sunlight.**

Applying these simple precautions, your stocks of FRITZSCHE oils will retain their superfine qualities almost indefinitely.

FRITZSCHE BROTHERS, Inc.

Pages from Our Perfumer's Notebook

ROSANLIK

For Use In: All compositions requiring a rose effect.

Odor Type: Reproduces the odor of the natural oil with great fidelity.

Remarks: The price and availability of this product make it of particular interest at this time to every user of rose oil. Strongly recommend that it be given a trial in your formulation, especially if you're concerned about future natural oil supplies.

ABSOLUTE LABDANUM F-264

For Use In: Bouquet, cologne, lotion and toilet water perfumes.

Odor Type: It has the characteristic amber, balsamic, somewhat leathery odor of Cistus Labdanum.

Remarks: This is a natural product that acts as a modifier as well as a fixative in compositions. It is also valuable in soap perfumery.

BASICOL YLANG EXTRA

For Use In: Any composition having natural oil of ylang ylang as an ingredient.

Odor Type: Outstanding duplication of ylang, even to its characteristic top note.

Remarks: Particularly useful now since it is composed of readily obtainable materials independent of the imported oil. Very lasting. Undergoes little change during entire evaporation range. Lacks harsh chemical character of inferior imitations. A proven product; highly recommend it.

When writing for samples and other details, please address us on your letterhead.

FRITZSCHE Established 1871 *Brothers, Inc.*

PORT AUTHORITY BUILDING, 76 NINTH AVENUE, NEW YORK 11, N. Y.

BRANCH OFFICES and °STOCKS: *Atlanta, Georgia, Boston, Massachusetts, °Chicago, Illinois, Cincinnati, Ohio, Cleveland, Ohio, °Los Angeles, California, Philadelphia, Pennsylvania, San Francisco, California, °St. Louis, Missouri, °Toronto, Canada and °Mexico, D. F.* FACTORY: *Clifton, N. J.*

Televising Odors

According to the claims of E. J. Stern in U. S. Patent 2, 540, 144, a system has been developed by which television viewers may be able to receive appropriate scents along with the picture and the sound. The device will automatically release predetermined scents at predetermined phases of the action. The odors will not come through the air from the transmitter station but will be released from containers at the receiver by light signals accompanying the radio waves. Substances to provide various odors are added to a harmless gas and put in containers at the television receivers. The light signals sent from the broadcast station will be of different frequencies, each frequency attuned to release the gas and odor from a particular container. The pressure of the gas will disperse the scent through the room.

Camphor from Tulsi Plant

A note in the February, 1951 issue of the *Chemurgic Digest* calls attention to the fact that preliminary experiments at the Forest Research Institute, India, have shown that the tulsi plant may be an excellent source of camphor. The tulsi, which is an ancient Indian plant used in ceremonial rites, will be cultivated in Madhya Bharat for further research, according to the Indian Government.

Studies in Kennewick Peppermint Oil

The region in the vicinity of Kennewick, Pasco, and Hanford, Wash., produces nearly 100,000 pounds of peppermint oil annually. The yield of oil is reported to be from 90 to 100 pounds per acre, which is among the largest in the United States. Unfortunately, the oil possesses an unpleasant odor which makes it difficult to market. Therefore an investigation was made by S. M. Wang and H. Bang (*J. Am. Pharm. Assoc.*, Scient. Ed. 40:113, 1951) to isolate the constituent which caused the unusual odor. It was found that, while the constituent responsible for the unpleasant odor could be removed, it could not be identified. Wang and Bang report that the unpleasant odor of Kennewick peppermint oil can be removed by chromatographic adsorption, using activated alumina, magnesium carbonate, or Norit. The best eluants studied were petroleum ether and solvent ether.

The use of the adsorption column indicates that the various constituents of the oil can be separated and suggests a method of obtaining menthol from peppermint oil.

Essential Oils from Tanganyika

In a discussion in *Colonial Plant and Animal Products* (1:109, 1950), E. Brown, H. T. Islip, F. Major and W. S. A. Matthews report on three samples of geranium oil forwarded to them from Tanganyika. The first sample received in November 1947 had been distilled in a home-made still from the leaves and stalks of *Pelargonium capitatum*, a yield of 0.3 per cent, having been obtained. The second sample received in September 1949 had been prepared from material from the same variety of *Pelargonium*, while the third sample received in October 1949 was from a different variety. All the samples possessed the characteristic rose-like odor of geranium oil. The odor in each case was good, being superior to that of samples of geranium oil from Tanganyika previously examined at the Imperial Institute and comparable with that of French colonial geranium oils.

The results of the examination of the clear filtered oils are in Table 1.

Samples of the oil, together with these analytical data, were submitted to experts in the field for their opinions. On this bases, it appears that Sample 1 is very promising especially as regards odor. The outstanding feature of this geranium oil prepared from *Pelargonium capitatum* is its high ester value of 84.3, equivalent to 35.5 per cent. expressed as geranyl tiglate. It was felt that oil similar to Sample 1 would have no difficulty in finding a market as a replacement for the Algerian or Bourbon oil. The results for Samples 2 and 3, taken in conjunction with the opinions expressed by the firms consulted indicate that both oils are of good quality.

In another report in this journal (p. 114) by E. Brown, T. J. Coomes and H. T. Islip, the constants of a sample of Tanganyika rosemary oil were given, as follows; with the B. P. requirements for comparison (Table 2).

Examination of the data on this sample of rosemary oil shows that it conforms to the requirements of the British Pharmacopoeia in all respects except the weight per ml., which is very slightly below the minimum specified. Apart from a rather high figure for total alcohols the constants for the oil also fall within the ranges recorded for Spanish rosemary oil, the oil produced in the largest amount commercially. The sample from Tanganyika had a more powerful odor.

TABLE 1.

	Sample 1	Sample 2	Sample 3
Specific Gravity	0.8944	0.8939	0.9079
Optical Rotation	−8°	−8.26°	−13.1°
Refractive Index	1.4631	1.4660	1.4740
Acid Value	7.4	5.7	6.0
Ester Value	84.3	77.5	69.6
equivalent to esters as geranyl tiglate, per cent. w/w	35.5	32.6	29.3
Ester Value after acetylation,	—	220.6	223.5
equivalent to "total alcohols" as geraniol, per cent. w/w	—	72.7	73.8
Solubility in 70 per cent, v/v alcohol at 15.5° C.	Soluble in 3.3 vol.	Not soluble in 10 vol.	Not soluble in 10 vol.
Solubility in 80 per cent, v/v alcohol at 15.5° C.	—	Soluble in 0.7 vol. Very slight opalescence on dilution.	—

TABLE 2.

	Present Sample	Requirements of B. P. 1948
Specific Gravity	0.8980	—
Weight per ml.	0.8925	0.895 to 0.914
Optical Rotation	−4.06°	−5° to +10°
Refractive Index	1.4699	1.466 to 1.476
Acid Value	1.2	—
Ester Value,	18.9	—
equivalent to esters as bornyl acetate, per cent. w/w	6.6	Not less than 2.0
Ester Value after acetylation,	59.5	—
equivalent to "total alcohols" as borneol, per cent. w/w	17.1	—
Free alcohols, as borneol, per cent, w/w	11.7	Not less than 9.0
" Apparent cineole content," per cent. w/w	21.0	Not more than 33
Solubility in 80 per cent. v/v alcohol at 15.5° C.	Soluble in 10 vol. with slight turbidity.	Soluble in 10 vol. with not more than slight turbidity.
Solubility in 90 per cent. v/v alcohol at 15.5 °C.	Soluble in 0.5 vol.	Soluble in an equal vol. with not more than slight turbidity

fine perfume bases

Albert Albek, Inc.

3573 HAYDEN AVENUE, CULVER CITY, CALIFORNIA

NUNCA VARIA
ALBEK

OWNERS AND DISTRIBUTORS OF THE WILSON GLIDER CLOSURES

ROUBECHEZ, Inc. 8 EAST 12th STREET NEW YORK 3, N. Y.

READERS' QUESTIONS

BRITTLE NAILS: I would like to ask you if there are special treatments or special preparations to strengthen weak nails that break easily. I would be very much obliged to you if you could tell me how to make a cream or solution to treat this condition. If you know of several preparations, I would be much obliged because it is often very difficult to get all the raw materials in this country. Bilbao.

It is difficult to be specific about this condition because brittle nails may be due to a number of factors such as diet, occupation, excessive use of solvents and washing compounds and many other conditions. Very often this can be overcome by immersing the nails in warm vegetable oil for varying periods.

Of course, a number of preparations are available for the specific purpose of increasing the natural suppleness of the nails and presenting their cracking or breaking. Various types of products are employed; making use of glycerine, fatty oils, and fatty creams. According to Winter, a simple solution for this purpose consists of:

Glycerine	**50.0 parts**
Rose water	**50.0 "**
Borax	**2.0 "**

A fatty preparation calls for the use of:

Anhydrous lanolin	**40.0 parts**
Petroleum jelly	**40.0 "**
Beeswax	**20.0 "**

A more elaborate fatty cream is made from:

Cocoa butter	**10.0 parts**
Cetyl alcohol	**5.0 "**
Beeswax	**10.0 "**
Anhydrous lanolin	**5.0 "**
Petroleum jelly	**50.0 "**
Liquid styrax	**5.0 "**
Peru balsam	**2.0 "**
Benzoin tincture	**8.0 "**

HAIR DRESSING: I am interested in preparing a hair groom using modern ingredients that will leave the hair feeling smooth but without a greasy surface. Duquesne.

I think that something along the following lines will serve your purpose:

A

Petrolatum	**7.5 per cent**
Mineral oil 65/75	**37.5 " "**
Beeswax	**2.0 " "**
Modified lanolin (Atlas G-1425)	**4.5 " "**
Sorbitan sesquioleate (Arlacel 83)	**2.0 " "**

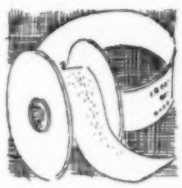
B

Water	**46.5 " "**
Preservative	**sufficent**

C

Perfume	**sufficient**

Bring (A) to 75°C. Bring (B) to 75°C. Add (B) to (A) slowly with moderate, but thorough agitation. Perfume at 45°C., and agitate until cold.



ADHESIVE TAPES: As a subscriber to Drug and Cosmetic Industry, *I would like to take advantage of your Reader's Question department. Will you give me a formula for adhesives such as are used on adhesive tape? Grand Rapids.*

As explained in the U. S. Dispensatory, the adhesive mass for such purposes is usually prepared from an elastomer (either natural or synthetic rubber), resins and suitable fillers. Specialized and extensive equipment is required for the grinding, milling and preparation of the ingredients and the mixing and spreading of the finished adhesive mass upon the cloth. Standards and tests for such adhesive masses are given in the U.S.P. but no specific formula is offered. This is quite understandable in view of the fact that the different companies make use of different mixtures.

Many of these mixtures are covered by patent and in this connection I would suggest that you check the following U. S. Patents: 2,382,731; 2,332,265; 2,389,469; 2,285,570. You might also want to check British Patents 559,271 and 545,713. These will give you some idea of the kinds and varieties of compositions used in the production of various adhesive tapes both for medical and industrial purposes.

FOOT CREAM: I would appreciate very much a formula for a foot cream containing a cooling compound such as menthol or any other compound you could suggest. San Francisco.

I think a foot cream such as you want could be made along the following lines:

Beeswax	**6.0 parts**
Soft petroleum jelly	**68.0 "**
Zinc oxide	**15.0 "**
Boric acid	**5.0 "**
Medicated composition	**6.0 "**

Melt the beeswax with soft paraffin, mix in the medicated composition, then add the sifted powders; when nearly cold, run through an ointment mill.

The medicated composition consists of:

Methyl salicylate	**88.0 parts**
Menthol	**2.0 "**
Camphor	**10.0 "**

GUMS
ARABIC—TRAGACANTH—KARAYA
(Whole, granular or powdered)

HYDROSULFITE of SODA
(Pharmaceutical grade)

GELLOID
(Pure calcium Carragheen sulfate)

SULPHONATED OILS
(Vegetable and mineral bases)

VISCO GUM E
(Specially prepared for wave-set solutions)

Ask for "The Story of Water Soluble Gums"

WOLF BRAND PRODUCTS
JACQUES WOLF & CO.
Chemicals PASSAIC, N. J.

High Grade COSMETIC Powders
Tamms
● Powdered Talc ● Infusorial Earth
● English Kaolin ● Clay and Silica
● Precipitated Chalk
Send today for prices and samples.
Write us about your special needs.
Dept. RM-11
TAMMS INDUSTRIES, Inc., 228 N. LaSalle St., Chicago 1

CHEMICALS for QUALITY CONSCIOUS MANUFACTURERS
CETYL ALCOHOL N. F.
MAGNESIUM TRISILICATE U. S. P.
CHLOROPHYLL
Samples and Data Sheets upon request
Aceto CHEMICAL COMPANY INC.
82 BEAVER ST., New York 5, N. Y.
Digby 4-9760

Patent Thoughts and Trends

(Continued from page 509)

methylamino carbazole, 4-methyl-7-diethylamino coumarine, 3-methyl-5-dimethylamino azimidobenzene, 2-(para amino phenyl) 5-amino benzimidazole, 2-phenyl-5-amino benzoxazole, 2-(para amino phenyl)-6-methyl benzthiazole, 3-dimethyl-amino acridine.

U. S. 2,350,047—issued May 30, 1944 to Klarmann et. al. and assigned to Lehn & Fink Products Corporation.

This patent suggests that the deteriorating effect of perspiration-retarding compounds on fabrics may be greatly reduced by incorporating a water-insoluble basic compound of a metal, preferably one not having any decided color. Specifically, oxides, hydroxides or carbonates of zinc, magnesium or aluminum are mentioned. Amounts of from about 1 per cent to about 3 per cent are said to be adequate.

Claim 2 is illustrative:

A perspiration retarding or inhibiting composition obtained by combining about 10 per cent to about 25 per cent of a soluble astringent salt of a polyvalent metal with from about 1 per cent to about 3 per cent of a water-insoluble metallic base.

U. S. 2,354,319—issued July 25, 1944 to Walter A. Inman.

A hand lotion which forms a protective film over the skin, reducing the tendency of the skin to chap and which facilitates the removal of foreign material such as grime, is disclosed in this patent.

The composition contains a film forming base (gelatine), a softening agent or plasticizer (glycerine), alum (to render the gelatine less soluble after it has been dried), and weak fruit acids.

Claim 1 is illustrative:

A protective preparation for application to animal skin and skin appendages comprising, as originally compounded ingredients, from 0.5 per cent to 2.5 per cent gelatin together with from 0.75 per cent to 4 per cent of a plasticizer selected from the group consisting of glycerine and glycols, such percentages being by weight of such preparation, lesser amounts of an alum and a harmless acid, the residue comprising essentially water, said preparation having been prepared by heating said ingredients to form a homogeneous clear solution capable of drying by evaporation to form a non-tacky film resistant to penetration by grease and oil that can be removed by washing with soap and water whereby such preparation can be applied to skin and skin appendages prior to exposure to grease and oil for facilitating removal from said skin and skin appendages of oil and grease subsequent to exposure to grease and oil.

U. S. 2,376,884—issued May 29, 1945 to Erwin Schwenk et. al. and assigned to Schering Corporation.

Laevo-ascorbic or cevitamic acid is recommended as a color stabilizer for hydroquinone, in particular in lotions and creams employed as "sun-tan" preparations.

Claim 1 is illustrative:

A composition for use in preventing sunburn of the human skin when exposed to the sun's rays but permitting passage of beneficial and tanning rays to the skin, comprising a hydroquinone-containing preparation containing a vehicle having incorporated therein a quantity of a member of the group consisting of laevo-ascorbic acid and its salts in catalytic proportions, said composition being stable and retaining substantially its normal color over long periods of time.

U. S. 2,377,188—issued May 29, 1945 to Schwenk et. al. and assigned to Schering Corporation.

Compounds having the ene-diol group—

$$\begin{array}{c} C = C \\ | \quad\quad | \\ OH \quad OH \end{array}$$

and particularly aliphatic carboxylic acids and lactones having such group, and their salts, such as the sodium, potassium, and other alkali metal salts, and likewise the alkaline earth metal salts, and in general the soluble salts, are said to be effective to prevent or inhibit deterioration or oxidation of air-unstable sun ray filters, such as hydroquinone, menthyl salicylate, umbelliferone acetic acid, etc.

Recommended stabilizers are laevo-ascorbic acid, dihydroxy maleic acid, d-ascorbic acid, among others. The inhibitors may be present in amounts from about 1 to 5 per cent of the weight of the sun ray filter.

Claim 1 is illustrative:

A sun ray filtering preparation for preventing sunburn of the human skin when exposed to sun rays while permitting beneficial and tanning rays to pass through to the skin, comprising an emulsified vehicle adapted to be spread upon the skin and containing an air-sensitive filtering agent of the group consisting of hydroquinone, menthyl salicylate, umbelliferone acetic acid salts, 2, 6-dichloro-pyridine-4-carboxylic acid and its esters and salts, and an oxidation inhibitor in the form of a reducing compound of the group consisting of laevo and dextro ascorbic acids, arabo-ascorbic acid, glucono-ascorbic acid, the mono acetone derivative of l-ascorbic acid, dihydroxy maleic acid and hydroxytetronic acid, and their alkali and alkaline earth metal salts, said preparation being stable and retaining substantially its normal color over long periods of time.

U. S. 2,395,665—issued February 26, 1946 to Samuel Isermann and Ernst Ohlsson.

The fatty alcohol esters of para and amino benzoic acids containing 14 or more carbon atoms in the fatty alcohol carbon chain are recommended a sun ray filters. Especially desirable compounds are the esters of myristyl, cetyl, oleyl and stearyl alcohols.

These compounds are substantially completely insoluble in water, which is said to be a desirable property especially when the materials are used in tropical countries or by swimmers. Further, the compounds are odorless.

Claim 1 is illustrative:

A preparation for protecting the skin against light of short wave length containing as its active ingredient a non-crystalline, odorless, non-anesthetic, substantially water insoluble ester of para amino benzoic acid and a fatty alcohol chosen from the class consisting of myristyl, cetyl, and stearyl alcohols.

RECENT PATENTS

2,532,547—**Ward, Blenkensop & Co.—2-Amino-alkyl-Glyoxaline Derivatives.**

MOULDS

LIPSTICK • SANITARY LIPSTICK • STYPTIC PENCILS • SUPPOSITORIES • MASCARA

PROGRESSIVE LABELING MACHINE, Inc.
137 West 22nd St., New York 11, N. Y.

ROUGE • COMPACT POWDER
also
PUNCHES FOR TABLETS

DIES

Pep up your PACKAGE

Old Spice Shaving Soap Mug, manufactured by Shulton, Inc., Clifton, N. J. uses colored "SCOTCH" Cellophane Tape to hold plastic cover.

SEALING—HOLDING—DECORATING—IDENTIFYING . . . these are a few of the ways "SCOTCH" Brand Cellophane Tape can brighten up your package for greater sales appeal!

Attractive "SCOTCH" Cellophane Tape in 13 lustrous colors is fast, easy to apply. Adapts itself well to fast, semi-automatic or automatic application. Why not see what it can do for your product. For samples, write today to Dept. CI 41, Minnesota Mining & Mfg. Co., St. Paul 6, Minn.

"SCOTCH" is the registered trademark of M. M. & M. Co.

CACHALOT fatty alcohols

by the ton

Large users of cetyl, oleyl, or stearyl alcohols depend on Cachalot for consistent quality, fair prices, and prompt delivery.

Cachalot alcohols meeting N. F., U. S. P., and T. G. A. specifications are uniform from lot to lot, year after year. Their reasonable cost enables you to use them as substitutes for hard-to-get raw materials or to improve your present product without increasing costs.

Cachalot alcohols by the ton are available for prompt shipment. And special mixtures of cetyl, oleyl, and stearyl may be had in quantity.

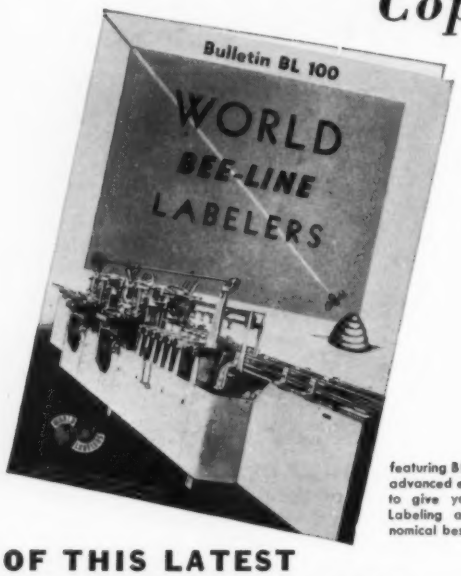
To find out more about your basic source of supply for these basic raw materials, write us today.

M. MICHEL AND COMPANY, INC.
90 BROAD STREET • NEW YORK 4, N. Y.

since 1926 basic suppliers to chemical manufacturers and distributors

cetyl, oleyl, stearyl: USP, NF & technical

Write For Your Copy...



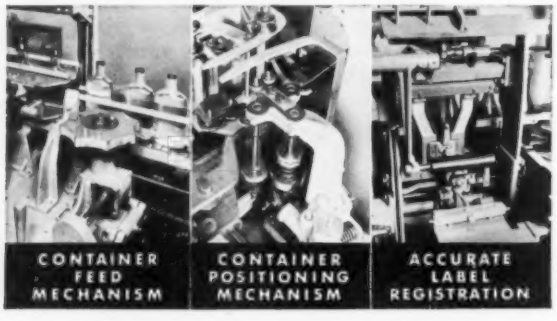
featuring BEE-LINE'S advanced engineering to give you Quality Labeling at its economical best!

OF THIS LATEST BULLETIN ON MODERN PRECISION-REGISTERED PRODUCTION LABELING

Advanced engineering makes BEE-LINE the World's finest machine for applying any combination of body, neck and shoulder labels, large or small, and medallions . . . to one or more sides of a wide variety of container shapes and sizes . . . at the profitable rate of two a second, and more. Study this Bulletin, and see for yourself why BEE-LINE is the outstanding Labeler for production—quality of labeling application—precision of label placement—operating efficiency—and economy.

WORLD LABELERS

BEE-LINE PRECISION ACTION IS EVIDENT IN . . . .



"YOU GET THE BEST LABELERS IN THE WORLD"

ECONOMIC MACHINERY COMPANY
WORCESTER 3, MASSACHUSETTS
DIVISION OF GEO. J. MEYER MANUFACTURING CO.
MILWAUKEE, WISCONSIN

2,532,788—**W. J. Sarnoff—Artifical Respiration by Electronic Stimulation.**
2,532,980—**Merck—The Production of Benzyl Penicillin.**
2,533,002—**Sterling Drug—1-Methyl-3-Piperidylmethyl Phenyl-(2-Thienyl) Acetate.**
2,533,003—**Sterling Drug—1-Methyl-3-Piperidylmethyl-3-Hydroxy-2-Phenylbutanoate.**
2,533,004—**U. S. A.—Fibrin clots and Methods For Preparing The Same.**
2,533,033—**Sharp & Dohme—N_4-Succinylsulfanilamidodiazines.**
2,533,124—**The Upjohn Co.—Preparation of Steroid Aldehydes.**
2,533,215—**Interchemical Corp.—Arginine Base Process.**
2,533,243—**Givaudan—Sympatholytic Agents.**
2,533,294—**Ortho Pharmaceutical Corp.—Extraction of Type A Specific Substance.**
2,533,434—**R. T. Clifton—Hair Curler.**
2,533,698-9—**Sandox Limited—Urethanes and Amines Containing the Lysergic Acid Ring System.**
2,533,958—**M. J. Root et al—Chemical Heating Pad, Particularly Useful in Permanent Waving.**
2,534,121—**Ayerst, McKenna & Harrison—Amine Addition Salts of Steroid-3-Monosulfates.**
2,534,235-47; *2,534,813*—**G. D. Searle—8-Haloxanthine Salts of Dialkylaminoalkyl Bases, Ethers, etc.**
2,534,260—**U. of Minn.—Digitalis Extraction.**
2,534,466—**Ciba-Octahydrophenanthrene-2-Carboxylic Acids.**
2,534,541—**S. B. Penick—Fractionation of Tyrothricin.**
2,534,567—**Burroughs Wellcome—N-Phenethyl-Beta-Alanines.**
2,534,774—**Soc. Usines Chimiques-Rhone Poulenc—Piperazines.**
2,534,823—**Wisconsin Alumni Research Found—Tetrahydro-phenanthrenes.**
2,535,014,5—**Dow—Dihydroxy Diphenyl Alkanes and Phenyl Alkanes. Coccidiosis Control Compounds.**

Studies on ACTH and Cortisone

(Continued from page 516)

term experiment in the elderly patient, feeling that perhaps 5 days of treatment in the neighborhood of 100 mg. of cortisone per day or ACTH 20 mg. given 3 or 4 times daily spread throughout the 24 hours is a practical means of improving these patients.

Now recently and at present the cortisone shortage presents a real problem. We cannot obtain enough cortisone in our hospitals for these patients. ACTH's cost is so great that that is impractical for many patients. If you have a hospitalized patient on whom you wish to try the effectiveness of ACTH or cortisone, it is well worth considering the intravenous administra-

tion of 20 mg. of ACTH diluted in glucose in an infusion over 6 or 8 hours. That will give a physiological response equal to or greater than 200 mg. of ACTH given intramuscularly. It has a tremendous stimulating effect on the adrenal, and we have found it very practical to use this method of treatment. It is cheap. As long as the patient is in the hospital the infusion offers no real problem. The needle can be arranged so that the patient can sit up, get out of bed, and still carry on with the infusion. That, I think, offers us some hope for the present, at least, of by-passing the shortage of cortisone and of by-passing the expense of 80 or 160 mg. of ACTH daily.

However, whenever we use these hormones it is important to think of some of the contraindications. One should not use ACTH in patients with hypertension. Cortisone has to be watched very carefully in those patients initially. Unless one is alerted to the possibility of salt restriction, water restriction, mercurials, and so forth, one does not go lightly into the administration of these hormones in patients with congestive heart failure. Renal insufficiency is another contraindication. In peptic ulcer, as you know, ACTH and cortisone increase greatly the secretion of enzymes in the stomach, and it is not unusual to see an ulcer activated or even a perforation occur in patients who have a history. Osteoporosis as a general thing would be a contraindication to any prolonged period of ACTH or cortisone, but would not be in contraindication for a short period of 5 or 10 days.

Emotional instability is probably one of the most important. One can oftentimes use ACTH or cortisone for a few days to bring a patient out of mild senile type of depression, but certainly the emotional debility of the elderly individual means that one must watch very carefully the reaction to such substances as ACTH and cortisone. Finally, of course, advanced generalized arteriosclerosis, largely if it affects the heart, brain, or kidneys, would be a contraindication to any large increase in salt retention or fluid volume.

But in general, I think that ACTH and cortisone wisely used for short periods of time do open approaches to the mobilization of the elderly individual which may greatly modify his hospital stay, his nursing care, and his general morale.

Drugs in Neuromuscular Disorders

(Continued from page 461)

for treatment of skeletal muscle disorders. The rationale, if any, for it appears to be little else than speculation on effects on the central nervous system analagous to those of atropine.

No experimental studies of these agents on motor systems have preceded their appearance on the market. These agents, mostly originating in Europe like Panparnit, Diparcol and Parsidol, and Artane in this country have had some clinical trial with equivocal results. All of them have been studied by their producers for their atropine-like effects on autonomic

KOMMON/ SCENTS!

A new baseball season is with us again. With Spring it's refreshing to see veteran managers breaking in new pitchers and working up old alibis.

•

The Brooklyn Dodgers seem happy enough with Chuck Dressen in Leo Durocher's old spot. But it's doubtful if Chuck can top Leo shouting down an umpire on the field or drowning out Frank Sinatra on TV.

•

The Giants, of course, got more than they bargained for in signing Durocher. To hear Laraine Day tell it, the Giants are the only Big League ball club managed by a Mr. and Mrs. radio team.

•

Most desperate of all baseball people, of course, must be the nation's sports writers. After unsuccessfully picking the Boston Red Sox to win for so many years, the scribes are turning in their form charts for Ouija Boards. The only pennants Boston fans seem to get come from the program hawkers for fifteen cents.

•

Only the N. Y. Yankees seem predictable. From Ruth to Di Maggio they have opened each season as invalids and wound up with batting averages higher than their temperatures.

•

The sports loving Cosmetic Industry appreciates organized baseball. What more appropriate locale than a ball park, with its health giving fresh air and sunshine, to call your clients, "robbers," and your competitors, "bums?"

George Fiedler

KELTON
Cosmetic Company

230 West 17th Street
New York 11, N. Y.

763 So. Los Angeles Street
Los Angeles 14, Calif.

Private Label Manufacturers Exclusively
Covered by Product Liability Insurance

CALL WH&C
for Raw Materials

Phone: CHelsea 3-6048

PEANUT OIL, U.S.P.
SESAME OIL, U.S.P.
CAUSTIC SODA
CAUSTIC POTASH
CARB. of SODA
CARB. of POTASH
FOAM AGENTS
LANOLIN
LECITHIN
CHLOROPHYLL
STEARIC ACID all grades
FATTY ACIDS all grades

Since 1838, headquarters for oils, fatty acids, detergents and specialties.

SINCE 1838

Warehouses in New York and Newark, N. J.

Welch, Holme & Clark Co., Inc.
439 WEST STREET NEW YORK 14, N.Y.

organs. Reason and rationale for the possibility of effects in spastic disorders is not at hand and awaits experimental investigation. They may well wait for further precise localization of the action of their parent compound atropine. Advances in the knowledge concerning atropine may well lead to a rational and successful planning of new chemical compounds.

Also needed are neuropharmacological studies on antihistamines for an explanation of recent clinical observations that agents like Benadryl or Thephorin may be useful as adjuncts in the therapy of spasticity.

In closing, the recognition of new facts and concepts of the pattern of organization in the central nervous system, particularly in the extrapyramidal system, and the adaptation of neurophysiological methods offer a new approach for pharmacologic research on site and mode of action of drugs in various parts of the central nervous system.

Therapeutic research of this type will provide the basis and rationale for more effective drug therapy required by many thousands of sufferers from motor dysfunctions mentioned before. Multiplied research efforts of the kind discussed carry a justifiable hope for therapeutic progress.

The recent recognition of a new pharmacological class of drugs characterized by their predominant depressant effects on spinal interneurons renews the hope that certain functional areas important in motor activity may be selectively affected by specially designed chemical compounds.

New Era Salesmen

(Continued from page 453)

The branded product salesman today has no reason to question his company's policy in recognizing him as an essential part of selling. Among the largest and most successful advertisers he is less and less classified as an order taker. Increasingly he is assuming the position of the tactician who must make everything planned and executed behind him, including advertising, perform at a profit.

The new era salesman will need advertising as much as did his forerunners. But he will not be a slave or a servant to advertising. In his increasingly tough competition, not only to secure proper distribution for his product but much more decisively, to secure in-store position, display and all of the other factors of favorable store relations, advertising must be only one of the essential elements or instruments of his strategy.

The new era salesman is living in a business world of dynamic changes in retailing. On nearly every trip into his territory he sees changes, retail experiments, and buoyant optimism side by side with worry and bitterness. The super-market, self-service, suburban shopping centers, vending machines, wagon jobbers and wagon retailers, house-to-house selling are the most important retail evolutions or extensions he will encounter.

In this confusing and sometimes bitter welter of

changing retail patterns the salesman will have home office policies to guide or frustrate him.

But this is a big country of many very dissimilar markets, and home office policy, in regard to many problems of local distribution and local retail relations can at best be flexible and can be planned for any one territory salesman only in broad outlines.

The salesman, upon whom rests the responsibility for adequate distribution to meet the needs of national advertising expenditures must face the conditions he finds within his own territory. This means, for instance, that the new era salesman must be familiar with population shifts in his territory such as new suburban developments. He must know about, and be able to appraise, changing shifts in customer traffic and buying. He must make sure that his goods are present, easily accessible and visible wherever the people who read his company's advertising are showing a preference for shopping.

All of this means a daily call upon experience, good balanced judgment, a clear conception of company policy and direction, and continually a tact and diplomacy that will make selling a real art.

According to some authorities we have exhausted the cream of the great savings in the consumer price of goods that can come from mass production, and inventions of automatic processing and packaging equipment. According to these authorities we can hope for an annual reduction in the cost of goods of about two percent, as a contribution of the factory.

Whatever the truth may be in this estimate, it is difficult to deny that distribution and the cost of distribution and selling has been increasing over the last generation and has consistently soaked up a substantial part of the cost reductions of the factory which would otherwise have been passed on to the consumer.

It may be that the New Era salesman can make decisive contributions in cost reduction of consumer goods. If it is the turn of marketing and distribution, as some seem to think, and as what may be called "mechanization" in retailing seems to suggest, that the hope of "more goods at lower prices" rests with more efficient distribution methods, then the salesman will play an important part.

The New Era salesman must be an important and a responsible individual. Given these responsibilities and with a new sense of his strategic importance, it is not at all unlikely that he will do a better job in securing proper and adequate distribution and in making this distribution perform in accord with his company's position and expenditures.

Synergistic Action of Drugs

(*Continued from page 463*)

A simple conception is to imagine the point of normality, say the body temperature, is like the center of a spider's web held in that position by a series of opposing forces. Simple contemplation of this schema shows that a change in position can be achieved by two exactly op-

4 Advantages with the MIKRO-ATOMIZER

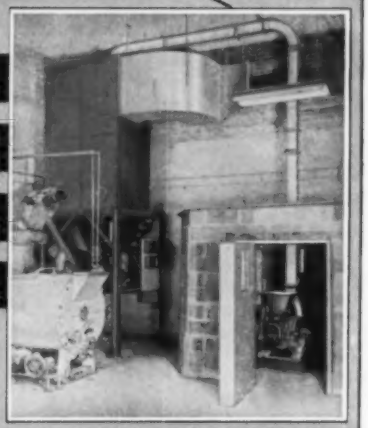
the MIKRO band of ECONOMY

SMOOTHER, ULTRA-FINE GRINDS

SAVINGS IN POWER

IMPROVED FINISHED PRODUCTS

LOWER INVESTMENT COSTS

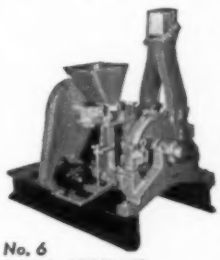


Typical installation of No. 6 MIKRO-ATOMIZER and MIKRO-COLLECTOR in large confectionery plant.

Because of its phenomenal ability to produce smooth, ultra-fine grinds and blendings at remarkably low temperatures, more and more economy-minded manufacturers are turning to the MIKRO-ATOMIZER as a means of improving their products and lowering production costs.

The MIKRO-ATOMIZER has proved a boon to many manufacturers, particularly in the fine grinding of:

Chemicals	Sugar	Sugar Mixtures
Dyestuffs	Cocoa	Food Mixtures
Pigments	Drugs	Synthetic Resins
Insecticides	Pharmaceuticals	Cosmetics



No. 6 MIKRO-ATOMIZER

The MIKRO-ATOMIZER has made possible grinding in the lower micron range without exorbitant production and equipment cost as compared with other available equipment. It is ideal for the ultra-fine grinding of certain insecticides for spraying operations.

SEND FOR—New Illustrated MIKRO Catalog

PULVERIZING MACHINERY COMPANY

22 Chatham Road Summit, New Jersey

MIKRO-PULVERIZER (FINE) -ATOMIZER (ULTRA FINE)

Reg. U.S. Pat. Off.

Also Makers of the MIKRO-COLLECTOR

PRESERVE OUR HERITAGE: FAITH, FREEDOM AND INCENTIVE

PRIVATE LABEL

Especially Fine

TOILET SOAPS
SHAVE SOAPS

OWNER MANAGEMENT

Ensures

COURTESY, SERVICE and QUALITY

COMPETITIVE PRICES

REINITZ SOAP CORP.

46-44 11th Street, Long Island City 1, N. Y.

STillwell 4-7870

posite means. One may increase the pull on one side (stimulation) or decrease the pull on the other side (inhibition). However the analogy goes further for it is clear there are several ways to "pull", as well as several to inhibit.

Now it happens that a combination of both actions, or even two different kinds of stimulation, or inhibition, are more effective than any single factor alone. That is to say that two drugs working together can achieve more than twice the dose of either taken singly. This is true co-operation in drug action, as is technically called Synergism, or working together.

It has certain very practical concomitants. One of the most important is the fact that practically all drugs have side-actions. By using a dose of one drug sufficient to produce the desired action, frequently one may occasion an undesirable side-action. On the other hand, synergistic drugs very rarely have exactly the same side-actions, in consequence a suitably chosen mixture may be entirely effective for the given function without occasioning unpleasant effects that may be unpleasant elsewhere.

The possibilities of synergism do not stop however with this simple conception. All along the line of physiological controls, from the complex external ones down to the most intimate internal controls of any given tissue the same sort of story holds true. In consequence what holds for broad expression of a multifunctional response, like heat temperature, the respiratory rate or the blood-pressure level, is equally true, though naturally more specific in detail, of a single functional response like the contraction of the uterus. I would like to term Specific Synergism, in contrast to the effect that one may achieve on a multifunctional expression, which I like to call, Functional Synergism. In actual fact the possibilties of effecting a co-operative type of control on function are already very wide, and daily become more extensive. There is little doubt that as a consequence the remedies of the future, will by appropriate design, become more efficient.

At this point the story of co-operative, or synergistic medicines, is only half told. The science of pharmacology shows clearly enough the potential ways of controlling function. Pharmacology, however, whilst an essential part is not the whole of therapeutics. This subject concerns itself with practical realities; with the cause of diseases; with the relief of pain and other noxious symptoms; and with all the problems that enable the body and mind of animals and man to exist more comfortably.

Consequently practical remedies have as their primary objective the relief of some disturbance which is nearly always complex in character or in association. For example, referring again to our model symptom, headache, this is often caused or associated with gastro-intestinal disturbance, especially an imperfect conveyance of the canal contents. The combination of some easily absorbed analgesic with the open and shut type of saline purge is thus not only a logical procedure, but, what is even better, it works well in actual practice.

Another common, indeed, very common, cause of headache is associated with a disturbance of the water salt balance affecting, with the rest of the body, the brain. The combination of an analgesic with a diuretic now recognized to be a very logical procedure, was empirically discovered a long time ago and is to-day expressed in the many combinations of aspirin and caffeine. These two examples are cited to illustrate that in practical symptomatic relief a co-operative action of an entirely different type is adopted, namely an attack on the different parts of the symptom complex, which usually means invoking quite separate functional responses.

A further example is seen in certain cough mixtures that combine a sedative to the respiratory mechanism along with an agent that renders a sticky sputum more fluid. Not only is irritable coughing decreased, but that which takes place is effective in removing the cause of the irritability, namely a sticky adherent sputum. The mechanisms involved however are entirely different.

A still more interesting example since it combines also an attack on a powerful psychogenic reflex, is to be found in the use of menthol, especially in nose drops. As respiration is vital to life it has been guarded with most sensitive and powerful reflexes, including and very importantly, psychogenic reflexes. Slight interference with respiration causes uneasiness. Serious interference may rapidly lead to a most profound and violent "panic reaction". A partially stopped up nose is far more distressing by reason of this reflex mechanism than from the actual interference in respiration, which indeed may be trivial. The feeling of cold produced by a local application of menthol "fools" this reflex, and the relief occasioned to the patient is entirely out of all proportion to any change in the passage of air. To add to this invaluable and unique remedy something that actually decreases the swollen erectile tissue, and add another that facilitiates the free flow of the partially dried pus exudate, and you have the elements of a well designed therapeutic agent. And, let us note well, containing a mixture of quite different beneficial actions, none of which can be replaced by any other ingredient.

This is a quite different type of synergism, or co-operation from that usually considered in pharmacology. It is true that all the actions are focussed on one target namely the relief of a patient suffering from a given symptom complex, but the mechanisms involved may be and often are entirely separate. This type of synergism, I venture to term Therapeutic Synergism, since its objective is the relief of a symptom complex in an intact person, rather than the control of some function, or function complex.

In summary there are then three types of Synergistic or co-operative medicines. Specific Synergism by which a maximum effect is occasioned on a given function with a minimum of side-effects and a maximum of efficiency. Functional Synergism whereby a multifunctional complex is affected appropriately through the different functions associated. Therapeutic Synergism in which the different functions are utilized to focus

GAIR

FOLDING CARTONS

Sell on Sight!

Smartly designed and brilliant multicolor Folding Cartons by GAIR are solving packaging problems for many manufacturers who are as meticulous about their packaging as they are about their famous products.

Sales, profits and prestige are increased with the SELL-ON-SIGHT magic of GAIR MULTICOLOR CARTONS.

WRITE TODAY for samples and technical information.

*Reg. U. S. GAIR Pat. Off.

ROBERT GAIR COMPANY, INC.

155 EAST 44TH STREET, NEW YORK • TORONTO

PAPERBOARD • FOLDING CARTONS • SHIPPING CONTAINERS

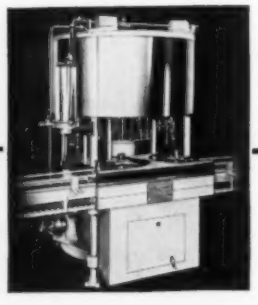
MOST VERSATILE FILLER

Fills Any Size Including Gallons

For filling liquids and semi-liquids. Designed for quick, on-the-job changeover for any container up to gallon size and with efficient speeds on all size containers without undue pressure upon the operator. For one-man operation.

Mechanical innovations introduce more comprehensive automatic machine operation for eliminating hand servicing. The product handling system is designed for quick clean-up after runs. The operating mechanism is simple and substantial for many years of enduring, uninterrupted filling service.

Seldom does a new machine, so quickly, make a place for itself in established filling set-ups either on steady production or as a versatile standby unit for peak loads. The Model B-49 Bulletin will give you the interesting details; write for it today.



U. S. Automatic Rotary Vacuum Fillers in five sizes. The Number One Filler on high production in world's largest plants. Write for "Rotary Filler Bulletin".

U. S. BOTTLERS' MACHINERY CO.
4013 N. Rockwell St. Chicago 18, Ill.

OFFICES: Boston—Dallas—Houston—Denver—Los Angeles—New York—Phoenix—Portland—San Francisco—Seattle—Tampa—Montreal—Toronto—Vancouver—Winnipeg—New Orleans—Philadelphia

EXPORT OFFICE: Toledo, Ohio

on a common target. It may also be added that this latter type of synergistic or co-operative action is probably of more interest to this Association than the other two which have considerable professional interest.

Blood Plasma Substitutes

(Continued from page 455)

obtained may be very high, it is subjected to partial hydrolysis to yield preparations of lower molecular weight. As noted in patents granted both in this country[13] and abroad,[14] the resulting dextran is suitable for use in the production of plasma substitutes.

The degree of branching and the molecular weight are important factors in dextran's efficacy and safety as a plasma substitute. Both of these factors can be controlled by adjusting the process conditions and, to a certain extent, by the choice of the culture strain of the organism used in the biosynthesis. Thus, the American dextran can be controlled to a molecular weight of between 30,000 and 250,000; falling at about the range of serum albumin which averages 72,000. This yields a material that is superior to the foreign products, which are not so closely controlled in this respect. Aside from investigations being carried out by industrial groups, improvements in dextran production and properties are being sought by scientists[15,16] of the Northern Regional Research Laboratories of the United States Department of Agriculture.

The basic pharmacologic studies on dextran were made by Gronwall and Ingelman.[9] They found that, when injected into animals, the solution was well tolerated and that it appeared to be quite effective in treating experimental shock. Further studies[17] gave support to the finding that, when the solution is administered as an infusion, it is not pyrogenic, toxic or antigenic. In addition to these European investigations, tests on humans with an American preparation of dextran have been very indicative. In one series[18] it was shown that this preparation of dextran consistently increased the blood volume proportionately to the amount administered and that a prolonged effect was obtained. In addition, cardiac output was increased in each case. The data obtained in other studies[19] indicates that this material is satisfactory for the osmotic expansion of plasma volume. Its use was not associated with any reaction or measurable impairment of renal or hepatic function.

Chemical tests show that about 25 per cent of the infused dextran, presumably the smaller-sized particles, is excreted during the few hours immediately following the injection. However, the level in the blood itself falls rather slowly during a period of about four days. From animal studies, there is no evidence that dextran accumulates in the tissues after leaving the blood stream. This, it has been pointed out,[20] suggests that the polysaccharide is broken down to glucose and then metabolized by the body as a source of energy. If this actually occurs, it makes dextran rather unique among plasma substitutes. This important but still theoretical

advantage of dextran awaits further confirmation. Final proof of the ultimate fate of dextran in the body may be forthcoming from the radio-active tracer techniques now being employed.[21]

Dextran is generally administered as a 6 per cent solution in 0.9 per cent sodium chloride solution. According to Ingelman,[22] the viscosity and colloid-osmotic pressure of such solutions are of the magnitude of plasma. In 1947 he reported that its therapeutic effects had been studied in bleeding and in histamine and contusion shock, with good effects on blood pressure, heart activity and respiration. Up to that time, dextran had been used on about 1,000 patients with very good results.

Two years later, Thorsen[23] stated that dextran was rather extensively used in Sweden; having been given to 5,000 patients with as much as four liters administered in some cases. The solution was found valuable in the treatment and prevention of shock and in Thorsen's hospital it was given routinely for the prevention of shock during major operations. In his opinion, dextran is very useful as a substitute for blood and plasma in cases in which an increase in blood volume or in colloid osmotic pressure is desired. Bull and his British colleagues[17] similarly reported that dextran has proved efficacious as a plasma substitute in burns, and that it has produced a sustained increase in the venous return in patients with surgical shock or hemorrhage.

As was previously mentioned, American workers have shown considerable interest in dextran. Some[24] have worked with the European products. Lundy and his co-workers,[10,11] for example, have used the Swedish brand of dextran for more than 1,500 cases, with generally satisfactory results. Others,[18,19] however, have devoted their attention to the improved domestic dextran. Thus Wilson and his associates[25] report that 15 patients in shock have received dextran with uniformly satisfactory effects. In discussing his observations on a total of 165 patients, Bloom[26] stated that as much as three-quarters of a pound of dextran has been injected without any undesirable effect. Many patients have received repeated injections without reaction.

Quite recently Laurence[21] cited Thorsen's report that more than 25,000 cases had been treated in Sweden with dextran, with untoward reactions in only one-fifth of one per cent. This was said to be better than the Swedish or American experience with blood plasma itself.

This brings up the fact that dextran has certain advantages over plasma.[1] Thus, it can be stored without refrigeration for an indefinite period of time. The solution can be sterilized and kept free of virus hepatitis and jaundice—conditions which have been transmitted by plasma. The material does not interfere with blood typing for subsequent whole blood transfusion, if needed. In addition, dextran solution can be produced at a fraction of the cost of plasma.

All of these findings point to the great potential value as a potent aid in the armamentarium of both the military medicine and civilian defense set-ups. Although

QUININE

"Braunschweig" Brand

QUININE SULFATE & SALTS
CINCHONINE & SALTS
CINCHONIDINE & SALTS

•

For prompt delivery

SUGAR OF MILK U. S. P.
"Whey" Brand

Delivery from spot stocks.

We are also headquarters for

Menthol	Cod Liver Oil
Camphor	Hyoscine Hydrobromide
Ichthammol	Atropine Sulfate
Naphthalene	Brucine Alkaloid & Sulfate
Sugar of Milk	Sulfur Precipitated

CHAS. L. HUISKING & CO., INC.
45 Clinton Ave., Brooklyn 5, N. Y.

London Agents
Wheeler & Huisking, Ltd.
26 Great Tower Street

Cable Address: HUISKING, NEW YORK
Telephone: Ulster 8-5800
Telegrams: Huisking WUX, N. Y.

SINCE 1827
PEDER DEVOLD P.D.
COD LIVER OIL U.S.P.
STANDARDIZED • TESTED • FINEST QUALITY • ALL POTENCIES
From Can to Carload Quantities. "The Bottlers' Choice Everywhere"

PEDER DEVOLD ® COD LIVER OIL USP, *Norwegian*
5 gal. cans, 30 gal. bbls., 30 gal. drums, and 50-56 gal. drums
Attractively lithographed 1 gallon cans.
PEDER DEVOLD COD LIVER OIL USP, High Potent
Available in all natural potencies.
"DEVOLKOD" COD LIVER OIL USP, *Non-Desteorinated*
DEVOLD VITAMIN A & D FEEDING OILS
"DEVOLKOD" VITAMIN OILS (*Fortified Cod Liver Oils*)
DEVOLD VITAMIN A OILS
PEDER DEVOLD WHEAT GERM OIL
VITAMIN A & D CONCENTRATES
DEVOLD DRY D3 (A Feed Supplement)
CAROTENE CRYSTALS

IMPORT EXPORT
PEDER DEVOLD OIL COMPANY
DIVISION OF CHAS. L. HUISKING & CO., INC.
151-155 VARICK ST., NEW YORK 13 • Telephone: ALgonquin 5-2900
Cable Address: VITAMINE, NEW YORK
Associated in Norway with PEDER DEVOLD OIL CO., LTD., Aalesund

SANTONIN N.F. VIII
Meeting Requirements of International Pharmacopoeias
ALKALOIDS of AMERICAN MANUFACTURE
SANTONINE COMPANY OF AMERICA
DIVISION OF CHAS. L. HUISKING & CO., INC.
45 CLINTON AVE., BROOKLYN 5, N. Y. Cable Address SANTONICUS, N. Y.

- ALKALOIDS
- ALLANTOIN
- AMINOACETIC ACID
- AMINOPHYLLINE
- AMPHETAMINE SALTS
- BARBITAL
- BENZOCAINE
- BENZYL BENZOATE
- BILE ACIDS
- CAFFEINE
- CHLORAL HYDRATE
- CHOLINE SALTS
- CINCHOPHEN
- DESOXYEPHEDRINE HYDROCHLORIDE
- EPHEDRINE SALTS
- MENTHOL U.S.P.
- METHYL SALICYLATE
- PARA AMINOBENZOIC ACID
- PARA AMINOSALICYLIC ACID
- PENICILLIN PRECURSORS
- PENTOBARBITAL SODIUM
- PHENOBARBITAL
- PROCAINE
- RUTIN
- SANTONIN
- SODIUM PARA AMINOBENZOATE
- SODIUM PARA AMINOSALICYLATE
- SULFANILAMIDE
- SULFATHIAZOLE
- THEOBROMINE
- THEOPHYLLINE
- VITAMINS

Unsurpassed Quality

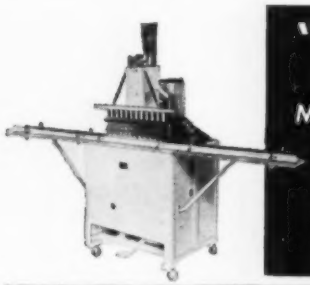
GI

para-aminosalicylic acid

Increasingly useful in tuberculosis, PAS is now second only to streptomycin in importance. Also available as the sodium salt.

GANE & INGRAM, INC.

43 West 16th Street, New York 11, N. Y.
Manufacturing Chemists: Plant, Newark, N. J.



"ESA" MULTIPLE SPOUT VACUUM BOTTLE FILLER

EASILY ADJUSTED NO DRIP SPOUTS

ALLOWS OPERATOR USE OF BOTH HANDS

Where 40 to 60 bottles per minute is sufficient volume the Ertel ESA Model Filler will do the job at lowest unit cost. Drip-proof spouts are easily adjusted to any filling height. Motor units and pumps are enclosed in handy cabinet. Sturdily constructed from cast sections for long reliable service. Ask for Catalog 18, it illustrates other Ertel Liquid Handling Equipment, too.

ERTEL SERVICE: We invite you to make use of our consultation service. Our engineering staff is always available to help in solving your Liquid Handling problems.

ERTEL ENGINEERING CORPORATION
KINGSTON NEW YORK
Representatives in Principal Cities

ERTEL

MANUFACTURERS OF HIGH GRADE ERTEL ASBESTOS FILTER SHEETS
ASBESTOS SHEET FILTERS • CYLINDER TYPE DISC FILTERS
PYROGEN FILTERS • VACUUM BOTTLE FILLERS • MIXERS • CAPPERS
CENTRIFUGAL AND SELF-PRIMING STAINLESS STEEL PUMPS

present production is comparatively small, spokesmen for Commercial Solvents Corporation have stated that facilities for producing 20 million bottles per year could be completed in six months to meet emergency needs. In addition to such uses, dextran may find important employment in hospitals and in private practice when whole blood or plasma are not readily available. The same holds true, of course, in cases of disasters like railroad wrecks, extensive fires and the like.

The advantages over plasma, as cited for dextran, also apply to polyvinyl pyrrolidone, commonly referred to as PVP. However, while specifications for dextran have been set up by the Subcommittee on Shock of the Committee on Surgery of the National Research Council, such a set of standards has not been established for PVP.

In Germany, where it originated, PVP was known as Kollidon. According to the B.I.O.S. Report, No.24,[27] it was the chief ingredient of the German plasma substitute which found extensive use in treating battle-front casualties. According to this report, this plasma substitute, called Periston, consisted of:

Sodium chloride	**800.0 Gm.**
Potassium chloride	**42.0 Gm.**
Calcium chloride, hexahydrate	**50.0 Gm.**
Magnesium chloride, hexahydrate	**0.5 Gm.**
Normal hydrochloric acid	**1,710.0 cc.**
Sodium bicarbonate	**168.0 Gm.**
Kollidon, 20% solution	**12.5 liters**
Distilled water, to make	**100.0 liters**

All in all, it appears that the hydrophylic colloidal solution was used successfully as a plasma substitute in the treatment of some half million war wounded. Since the cessation of hostilities, Periston has been employed routinely in many surgical clinics in Germany.[28] A 3.5 per cent solution of PVP in physiologic saline, called Subtosan, has been used in other parts of Europe, notably in Italy.[29-30-31]

Realization of the possibilities of using plasma substitutes of this kind in the current emergency has stimulated American interest in PVP. For example, General Aniline and Film Corporation, New York, N. Y. intends to devote a good sized plant to the production of the material.[2] Schenley Laboratories, Inc., New York, N. Y. is doing considerable research on PVP, but at present is importing the semi-finished material which is purified in their plants in this country.[32]

The raw materials for polyvinyl pyrrolidone are acetylene, formaldehyde and ammonia. Steps are taken during the manufacturing process to maintain the desired molecular weight so that this value averages between 40,000 and 50,000 in the finished product. This American product is spray dried to a powder.[1] It is said[33] that this controlled process insures uniformity and eliminates concern over blood groups and allergic reactions. Sterilization is easy, thus reducing the possibility of infection. The powder and the aqueous solutions made from it may be stored almost indefinitely. According to data presented in one report,[28] the 3.5

per cent solution forms an elastic mass rather than a cake of ice on freezing, thereby obviating ampoule breakage. The preparation has been frozen at −20° C. and thawed repeatedly without noticeable alteration. The solution also was stable under desert conditions.

There is substantial European literature on laboratory and clinical findings with respect to the use of PVP in the formulation of blood plasma substitutes. From these data[28-31] it is evident that the solutions have been used extensively in humans for over a decade in amounts ranging from one to three liters in the emergency treatment of circulatory collapse from a variety of causes. Employed in the prevention and management of shock and cerebral edema, PVP solutions restore reduced blood volume following acute hemorrhage or severe trauma. Though effective in restoring circulation and maintaining blood pressure, the material is non-reactive in the body, is well tolerated and does not induce sensitization. A single infusion of the fluid maintains circulating volume, after injury, for a period of 12 to 24 hours. It is excreted via the kidneys without impairment of renal or hepatic function. In general, PVP solutions have the same therapeutic indications as plasma, but it cannot replace transfusion of whole blood. However, it gives the surgeon the necessary time to obtain the proper type of blood, when blood transfusion is indicated.

As yet, the American literature is not very extensive, but this is being remedied by investigations now going on in various laboratories and hospitals. However, some indicative work has been done by Lundy and his associates.[11] Thus, in comparing the 3.5 per cent PVP solution with the 2.5 per cent solution which was formerly administered, they observed that much better results are obtained with the more concentrated product, especially from the standpoint of maintaining blood pressure. They also cite Morrison's[34] investigations on animals which indicate that PVP and dextran solutions are equally effective.

In passing, it should be noted that PVP possesses potentialities in therapeutics other than as a plasma substitute. It has been found that it has a remarkable ability to form chemical complexes with a variety of substances and thus act as a detoxifying agent for a number of potent though dangerous drugs.[33] In the case of iodine and mercuric cyanide, for example, such complex formation increases the toxic limits by a factor of 10 to 100. With other agents, the PVP complex appears to have a retarding effect, extending the drug's action over a longer time period.[1]

Although dextran and PVP seem to be the most promising materials should the authorities decide to stockpile plasma substitutes or extenders, other compounds are being investigated. Gelatin, long employed as a plasma replacement, is one of the substances receiving renewed attention. Considerable information[35-38] on the value of gelatin for this purpose was made available during the war and much of these data were reviewed[39] in Drug and Cosmetic Industry in 1945. The current status of gelatin as a plasma extender is well in-

BIG or LITTLE

there's a Stainless Steel SAN-I-TANK .... to fit your special needs

New type "CHR" jacketed, insulated, stainless steel SAN-I-TANK is suitable for all types of hot or cold, light or heavy processing. Wiping action of agitator arms prevents mix from lumping or adhering to tank sides. Standard capacities: 150, 300, 500, 1000 gallons. Write today for Bulletin CHR-50.

To simplify blending, mixing, storage — or heating and cooling — whether your need is for a horizontal or a vertical tank, with or without agitators, specify Stainless Steel SAN-I-TANKS.

Type "T" is an open tank for processing and storage. Adapted to standard fittings, this sturdy stainless steel SAN-I-TANK is desirable where large tank capacities are not required. Standard Capacities: 60, 100, 200, 300, 400, 500, 600, 700, 1000 gallons. Write today for Bulletin SS-50.

STAINLESS STEEL SAN-I-TANKS

METAL GLASS PRODUCTS COMPANY

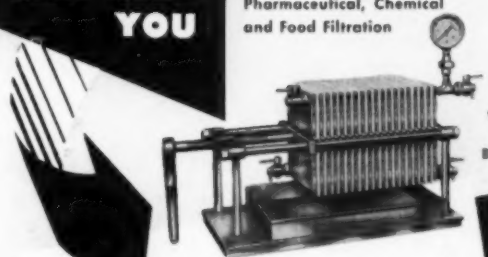
BELDING 4, MICHIGAN

THIS IS HOW THE SANITYPE CAN HELP YOU

PRESSURE STERILIZING FILTERS

for

Bacteriological, Biological Pharmaceutical, Chemical and Food Filtration



Write For Bulletin

All stainless steel, with no porous, pitted or rough surfaces—and every part coming in contact with liquid, highly polished. All unnecessary threads, welds, etc. have been eliminated, simplifying cleaning. Quickly opened and closed. Flexible for double or triple filtration. No rubber washers. Uses any type pad, paper or cloth.

F. R. HORMANN & CO., INC.

17 STONE STREET · NEWARK 4, N. J.

Northern Glass Company, 118 Sacramento Street, San Francisco, Cal.

DEPENDABLE
COSMETIC COLORS

CERTIFIED D & C
LO-MICRON
THOMASSET QUALITY COLORS

from "The Talc House"
Call on Whittaker

TALCS FOR

Face Powders, Baby Powders
Barber Supplies, Body Powders
Creams, Lotions, Pan Cake
Rouge, Liquid Powder

WHITTAKER
CLARK &
DANIELS, INC.

260 West Broadway
New York 13, N. Y.

for UNIFORM PURITY
UNIFORM TEXTURE
UNIFORM WHITENESS

Specify
BEEHIVE BRAND
Beeswax

Experimental data and practical manufacturing experience of nearly 100 years' specialization in beeswax and beeswax compounds are at your service without cost or obligation. Write about your beeswax problems to WILL & BAUMER CANDLE CO., INC., Syracuse, N. Y. Est. 1855

Spermaceti—Ceresine—Red Oil—Yellow Beeswax—Composition Waxes—Stearic Acid—Hydistear

dicated by the fact that the National Research Council has set up standards for this material and that it is being considered for stockpiling as a plasma substitute.[1]

More information on the value of gelatin has been provided in later reports. For example, Felmus[40] administered a 6 per cent macromolecular gelatin solution to 97 patients suffering from varying degrees of shock from hemorrhage. The solution was administered intravenously while they awaited cross-matching, typing, Rh determination and the arrival of whole blood for transfusion. All the patients showed a good response, 93.8 per cent within 15 minutes after the start of the infusion, as evidenced by a definite and sustained elevation of blood pressure, improvement in the quality and slowing of the pulse, and in general clinical recovery from shock. There were no deaths in the series nor were any anaphylactic or pyrogenic reactions observed. Felmus feels that the gelatin solution is superior to pooled plasma because it eliminates the very real danger of transmitting the virus of homologous serum jaundice.

However, as pointed out in one recent report[1] gelatin has the disadvantage of a relatively high gel point. The fact that it must be warmed to make it liquid makes it unsuitable under certain circumstances, as in forward battle areas. However, this may be remedied by the rise of oxypolygelatin. As noted by Koop,[8] there is evidence that the application of oxidation and polymerization procedures to bone gelatin may increase its fluidity without seriously changing its desirable physiologic characteristics. Oxypolygelatin and skin gelatin are being evaluated along with PVP and dextran.

Noteworthy in this connection are the observations of Lundy and his co-workers.[11] They state that in cases of severe shock, such materials as dextran, Periston (PVP solution) and gelatin are definitely indicated for supporting circulating volume in the cardiovascular system. They also note that these solutions remain within the vessels much longer than can be expected of blood or plasma or solutions of crystalloid materials. Moreover, they have seen no harm come from the use of these solutions.

Other, newer materials are now under investigation as possible agents for making plasma substitutes. Thus, the most recent American contribution is a polysaccharide obtained from the familiar vegetable, okra. Investigations on this okra derivative are being carried out at the Marquette University Medical School. Animal studies indicate that the material is completely metabolized in the body and that it is not stored in the liver after injection. The product still awaits clinical evaluation. A patent for making the material has been applied for, the pending patent being assigned to the university.[1-41]

Another recent entry into the field of plasma substitutes is a product known as Laminarin. Obtained from a brown seaweed available around the Scottish coasts, the material is said[42] to be very simliar to ordinary starch in chemical composition. It is largely composed of glucose units linked in chains. In addition

to being under investigation as a plasma substitute, laminarin is also being studied as a replacement for the talc of surgical powder.

Of course, various other substances have been tested in the past as possible plasma substitutes.[8-43] Unfortunately, most of them have failed to meet one or more of the basic requisites of plasma replacements. Thus, as pointed out editorially[20] in the *Journal of the American Medical Association*, earlier attempts to use such materials as acacia and pectin, while at first apparently successful, were doomed to failure because they were really foreign substances which the body had no way of metabolizing. They accumulated in the tissues and, if a large amount was injected, serious anatomic changes followed.

BIBLIOGRAPHY

1. Anon.: Chem. & Eng. News 29:650, 1951.
2. Self, S. B.: Wall Street Journal, January 31, 1951, p. 1.
3. Lesser, M. A.: Drug & Cosmetic Industry 58:504, 1946.
4. Lesser, M. A.: Drug & Cosmetic Industry 50:267, 1942.
5. Moon, V. H.: (through) Science News Letter, June 20, 1942, p. 393.
6. Koons, M. E.: J.-Lancet 66:4, January, 1946.
7. Snell, A. M.: Prac. Staff Meeting, Mayo Clinic 18:247, 1943.
8. Koop, C. E.: American Journal of Medical Science 213:233, 1947.
9. Gronwall A. & Ingelman, B. G. A.: Acta Physiol. Scand. 7:97, 1944; ibid 9:1, 1945.
10. Lundy, J. S.: Minnesota Med. 34:21, January, 1951.
11. Lundy, J. S. Gray, H. K. & Craig, N. McK.: Arch. Surg. 61:55, 1950.
12. Renfrew, A. G. & Cretcher, L. H.: J. A. Ph. A., Scient. Ed. 38:177, 1949.
13. Gronwall, A. J. T. & Ingelman, B. G. A.: U. S. Pat. 2, 437, 518, 1948.
14. Aktiebolaget Pharmacia: Brit. Pat. 583, 378, 1946.
15. Jeanes, A., Schieltz, N. C. & Wilham, C. A.: J. Biol. Chem. 176:617, 1948.
16. Jeanes, A., Wilham, C. A. & Miers, J. C.: J. Biol. Chem. 176:603, 1948.
17. Bull, J. P. et al.: Lancet 1:134, 1949.
18. Witham, A. C., Fleming, J. W. & Bloom, W. L.: Paper presented at Annual Meeting, South Sect., American Federation for Clinical Research, New Orleans, January, 1951.
19. Bloom, W. L.: Paper presented at Annual Meeting, South Sect., American Federation for Clinical Research, New Orleans, January, 1951.
20. Editorial: J. A. M. A. 139:850, 1949.
21. Laurence, W. L.: New York Times, December 12, 1950.
22. Ingelman, B.: Acta Chem. Scand. 1:731, 1947.
23. Thorsen, G.: Lancet 1:132, 1949.
24. Turner, F. P. et al.: Surg., Gynec. & Obstet. 88:661, 1949.
25. Wilson, J. S. et al.: Paper presented at Annual Meeting, Southern Sect., American Federation for Clinical Research, New Orleans, January, 1951.
26. Bloom, W. L.: Symposium on dextran, New York, N. Y., February 7, 1951.
27. Coppock, J. B. M.: "The Pharmaceutical Industry in Germany during the Period 1939-1945," London, B.I.O.S. Surveys, Report No. 24 (through) Office of Technical Services, U. S. Dept. of Commerce, 1950, pp. 43-44.
28. Dutchess, C. E.: "PVP (Macrose) and the Blood Program," New York, Schenley Labs., Inc., 1951, 94 pp.
29. Battestoni, L.: Med. Intern. (Milan) 56:124, 1948.
30. Battezzati, M.: Bol. e Mem. d. Soc. Piemontese de Chir. 18:99, 1948.
31. Clerc, J. L.: Therap. Umsch. 4:149, 1948.
32. Schwed, W. W.: Personal communication.
33. Anon.: Chem. Ind. Week 68:17, January 20, 1951.
34. Morrison, A. E.: An evaluation of replacement fluids in laboratory animals following controlled hemorrhages, Thesis, Graduate School, University of Minnesota, 1949.
35. Koop, C. E. et al.: Surgery 15:839, 1944.
36. Kozoll, D. D. et al.: Am. J. Med. Sci. 208:141, 1944.
37. Jacobson, S. D. & Smyth, C. J.: Arch. Int. Med. 74:254, 1944.
38. Evans, E. I. & Rafal, H. S.: Ann. Surg. 121:478, 1945.
39. Lesser, M. A.: Drug & Cosmetic Industry 56:176, 1945.
40. Felmus, L. B.: Am. J. Surg. 78:374, 1949.
41. Anon.: Drug Trade News 26:40, February 1, 1951.
42. Anon.: Brit. Med. J. 1:14, 1951.

Technical Service in Bulk Pharmaceuticals

(Continued from page 465)

pharmaceutical preparations derived from them and the greater and more ramified stability problems encountered—the need was visualized for a separate laboratory staffed with people having specialized experience in the formulation and development of pharmaceutical products. It is felt that a good beginning has been made toward the desired goal of being able to render a substantial service to the industry. By way of illustrating the activities of this laboratory, brief mention might be made of the following project on which has been expended considerable time and effort.

When folic acid was first introduced in medicine, it was used in the form of compressed tablets and as an injection. The compressed tablets offered no difficulty,

IN YOUR FACE POWDERS...

ARE YOU TAKING FULL ADVANTAGE OF THESE PROPERTIES OF HORSE HEAD U.S.P. ZINC OXIDE?

OPTICAL
- High covering power
- Warm whiteness

PHYSICAL
- Fine texture
- Good oil absorption
- Superior adherence
- Good fluffiness
- Perfume fixative
- Easy to blend and tint

CHEMICAL
- Essentially neutral
- Amphoteric
- Exceptional purity
- Deodorizes by neutralizing perspiration

PHYSIOLOGICAL
- Mildly astringent
- Screens out sunburn rays
- Bacteriostatic action
- Soothing
- Non-toxic
- Protective

HORSE HEAD PRODUCTS

Specify U.S.P. Zinc Oxide made by—

THE NEW JERSEY ZINC COMPANY

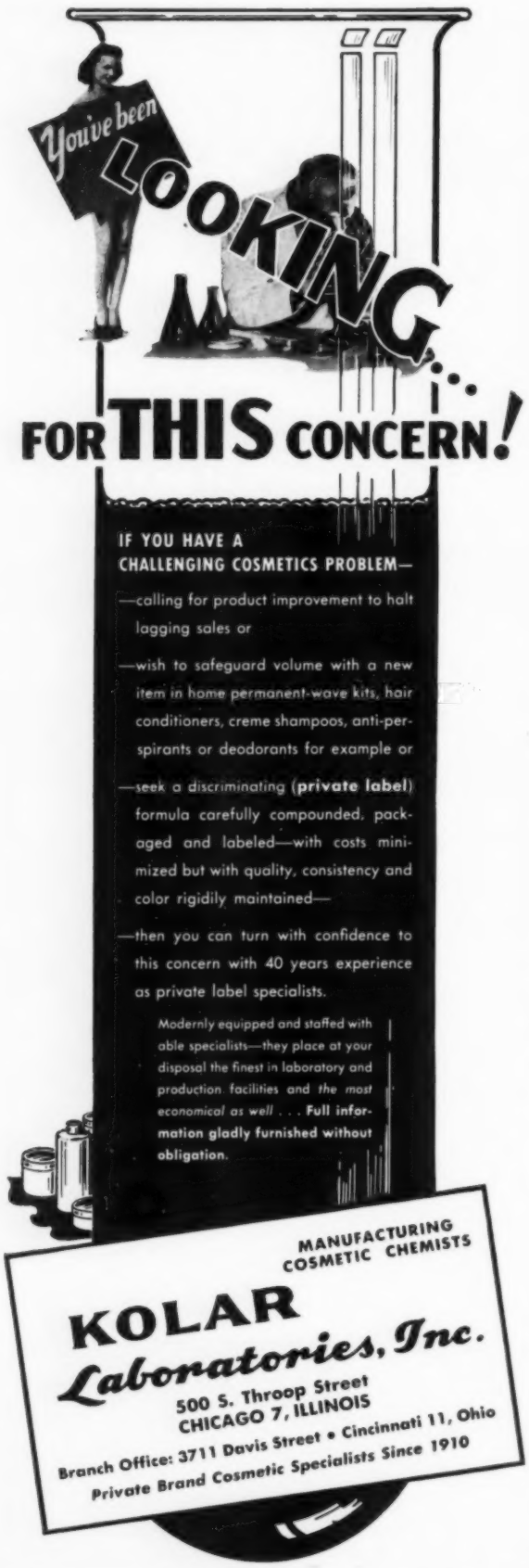
Founded 1848

Products distributed by

The New Jersey Zinc Sales Company

New York · Chicago · Boston

Cleveland · San Francisco · Los Angeles


You've been
LOOKING
FOR THIS CONCERN!
IF YOU HAVE A
CHALLENGING COSMETICS PROBLEM—
—calling for product improvement to halt lagging sales or
—wish to safeguard volume with a new item in home permanent-wave kits, hair conditioners, creme shampoos, anti-perspirants or deodorants for example or
—seek a discriminating (private label) formula carefully compounded, packaged and labeled—with costs minimized but with quality, consistency and color rigidily maintained—
—then you can turn with confidence to this concern with 40 years experience as private label specialists.
Modernly equipped and staffed with able specialists—they place at your disposal the finest in laboratory and production facilities and the most economical as well . . . Full information gladly furnished without obligation.
MANUFACTURING COSMETIC CHEMISTS
KOLAR
Laboratories, Inc.
500 S. Throop Street
CHICAGO 7, ILLINOIS
Branch Office: 3711 Davis Street • Cincinnati 11, Ohio
Private Brand Cosmetic Specialists Since 1910

nor did the parenteral solutions prove particularly troublesome after a special parenteral grade of folic acid had been introduced. However, folic acid quite rapidly came to be used in combination with a wide variety of other medicinal substances such as the vitamins of the B complex and other vitamins, various forms of iron, and several types of liver. The number and variety of questions coming in from the field was such that no piecemeal approach to the solution of the problem seemed adequate, although fortunately many of the proposed combinations were in the form of tablets or capsules, where stability and compatibility problems were usually no more annoying than those customarily encountered with vitamins in general.

A rather large-scale study was launched on the compatibility of folic acid with the various members of the vitamin B complex. Tests were carried out in aqueous media both with folic acid in solution and under conditions where the folic acid was for the most part undissolved. Accelerated storage tests were attempted and some of the data obtained were anomalous, necessitating a full-term storage test period for verification of the results. The collected data from this study, which have only recently been presented publicly, serve to define the limits of applicability of folic acid as a component in various types of pharmaceutical preparations.

It should be emphasized at this point that the proper function of this laboratory is not judged to be the development of complete, finished formulas for pharmaceutical preparations. That is considered the prerogative of the pharmaceutical manufacturer, who is desirous of putting his own skills and experience into the creation of distinctive products having individuality and originality. The proper sphere of activity of this laboratory is the solution of as many as possible of the physical and chemical problems underlying the compounding of preparations from Calco basic products, the resulting information being passed on to the industry as rapidly as possible, in order to facilitate their own development work. Type-formulae for various kinds of preparations are developed and published, but these are intended only as advanced starting points for the manufacturers' own development work. In assigning problems for attack, economical considerations, as well as those mentioned previously, require the selection of those having the widest scope of interest to the industry as a whole. Highly specialized projects cannot be accepted, nor those likely to lead to results limited in their general applicability. On the other hand, questions of any kind regarding the compounding of Calco products are welcomed. Often the necessary information is on hand and can be put to use without any additional laboratory work. Furthermore, a problem may be visualized as having wide interest among the members of the industry, only through receipt of a number of questions on the same topic from different sources.

A very important source of technical service information is the considerable number of other laboratories at

Calco beyond the Technical Service Laboratory itself, namely, the Application Research Department with its three branches, physical chemical research, microscopic, and spectrophotometric; the Chemical Research and Process Development Departments, and the Standards Laboratory. To describe fully the potential which is available would be unduly time-consuming, but several of the research groups may be mentioned which have been particularly helpful in the past.

First of all, there is the Chemical Research Department proper. While the principal function of this group is research on new chemical compounds of possible medicinal value and the development of economical processes by which promising compounds may be produced in quantity, it is natural that with their deep and intimate knowledge of the chemistry of Calco products, they can often assist materially in the solution of certain problems involving stability and compatibility. Another group, known as the Standards Laboratory group, is occupied solely with the development of analytical procedures suitable for use in the control of Calco products and, incidentally, in controlling pharmaceutical preparations in which these products are present. In the field of the chemistry of colors, Calco fortunately has a very well-established Service Laboratory group, whose wide and deep knowledge of the chemistry of the various food and drug colors enables them to aid in the solution of color problems which arise in the course of the development of pharmaceutical preparations. Another specialized group which might be mentioned is that which is engaged in the development of spectrophotometric methods and equipment. The techniques available within this group are extremely valuable in the purification of Calco products at an early stage of development and in the setting up of standards and spectrophotometric analytical methods used in their control. They have also proved very helpful in the solution of some compounding problems.

There exists also a Microscopical Laboratory which is equipped with a great variety of specialized apparatus permitting it to investigate problems in crystallography, particle size, and related fields. Finally, there are located in many other laboratories devoted to other fields than pharmaceutical, a large number of specialists of various types who are available for consultation with regard to pharmaceutical problems. This includes a large physical chemistry group which has had particular experience and success in the solution of problems involving dispersions of solid particles.

The Central Research Laboratories of the American Cyanamid Company at Stamford, Connecticut, also frequently make contributions to the technical service activity. That group is engaged in the research on new compounds and their screening for usefulness in chemotherapy. However, projects carried on there have, incidentally, developed information which was of particular value to technical service. For example, it was in the Stamford Laboratory, in the course of a study of the metabolic products of sulfadiazine, that a paper

"Selectaroma"

denotes our finest range of specialty replacements for scarce and high-priced natural oils.

Your first, as well as last, impression of the "Selectaroma" line will be favorable because these materials smell like their natural counterparts from beginning to end.

Bergamot
Cananga
Geranium
Jasmin
Lavender
Rose
Ylang

You can be assured of a continuous supply of consistently high-quality materials at favorable prices.

Samples are available for evaluation tests.

COMPAGNIE PARENTO INC.
CROTON-ON-HUDSON
NEW YORK

New York **Detroit** **Chicago**
Toronto **Montreal**

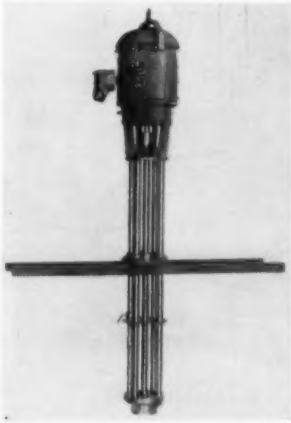
PERFUME BASES of Merit . . .

CONSTANT research, skillful blending and development of subtle aromatics by the Perfume Chemists of N.B.W. assures the quality of its Essential Oils, Aromatics and Floral Creations.

To be sure of constant high quality and lasting consumer acceptance of your products . . . Rely on NEUMANN-BUSLEE & WOLFE, Inc. where RESULTS have merited your repeat business since 1920.

NEUMANN-BUSLEE & WOLFE INC.
228 W. Huron St. Chicago 10, Ill.

EPPENBACH
HOMO-MIXER
A MIXER FOR SOLVING
YOUR PROCESSING PROBLEMS



The Homo-Mixer reduces particle size — increases total surface area—shortens batch cycles.

An efficient emulsifier and disperser—easily sterilized and cleansed.

Mixes in vertical planes—prevents stratification and dead spots—minimizes surface boil.

Available in laboratory, pilot plant and production sizes.

Designed to fit your tank or kettle—or furnished with single shell, steam jacketed, electrically heated, oil bath or tilting type kettles.

Write for Copy of Catalog No. 402

EPPENBACH INC.
45-10 Vernon Blvd. Long Island City, N. Y.

chromatography procedure was developed which was subsequently found useful for the differential assay of mixed sulfa drug preparations.

Two other sources of information used in Technical Service should be mentioned. One consists of outside contacts in the universities and in various specialized laboratories. Research at such places, whether dealing primarily with clinical medicine, with pharmacological testing, or with the pharmaceutical aspects of medicinal chemistry, produces information from time to time which can be used directly in Technical Service. A still further source of information is through contacts abroad. Representatives in a large number of foreign countries are in a position to forward on-the-spot news of interesting developments.

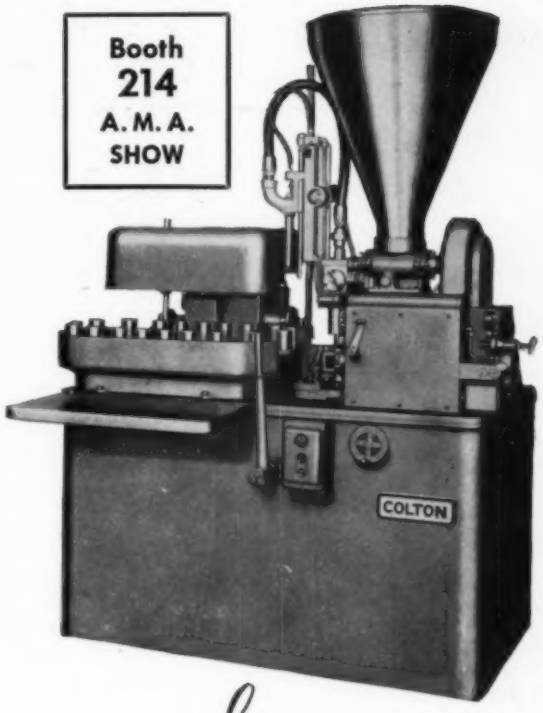
Having mentioned the various kinds of information which are dealt with by a Technical Service Department in this industry, it may be of interest to take what is for Calco an important group of products, namely, the sulfa drugs, and to illustrate how each of these sources of information made its contribution to the sum total of Technical Service. Three or four years ago the sulfa drugs were used singly in the form of compressed tablets except for a very small proportion which was then and still is used parenterally, usually for initiating therapy in severe infections. One important development in sulfonamide therapy was the administration of these drugs in the form of suspensions of finely divided sulfas. The original discovery was published in the regular medical literature and was to the effect that sulfa drugs, when given in liquid form as finely divided solids, were absorbed more rapidly than when given in the usual compressed tablet form. A corollary advantage of such liquid products was that they could be easily administered to infants and small children, or even to adults who might have difficulty in taking the required number of rather large half-gram tablets. The original discovery involved a special form of the sulfa drugs prepared by precipitating the drug in the presence of supersonic vibrations. At a later date the Process Development group at Calco in collaboration with the Manufacturing group succeeded in developing a further improved method of conditioning the sulfa drugs. This improvement in particle characteristics made possible the formulation of more stable dispersions, presumably with better absorption characteristics when taken internally. The development and the routine manufacture of these products in this fine form required the cooperation of the Microscopical Laboratory which developed test methods suitable for controlling the degree of dispersion of the particles. The method which was worked out involved dispersing a small sample of the powder in a suitable mounting medium and counting under the microscope an appropriate number of particles, differentiating between certain size ranges. In order to confirm the over-all superiority of the new product, a study was carried out by a group of specialists who had previously developed and published a sedimentation procedure involving the Sharples supercentrifuge, for the particle size analysis

of a finely powdered substance. By this means, a definite superiority was established in the case of the newly developed product, confirming the conclusions obtained by microscopic particle count. Thus, four separate groups of workers, namely, the Process Development, Production, Microscopical Laboratory, and a branch of the Physical Chemical group, contributed to the advancement of this new form of sulfa drug therapy.

Continuing with the illustration of technical information as applied to sulfa drugs, another development may be considered which had an even greater impact upon the usage of sulfa drugs in medicine, namely, the use of mixtures of two or more individual sulfas, each in a partial dosage, the total dosage being equal to that usually used for single sulfa drugs. Investigations were carried out both in Sweden and in this country and because of the simplicity of the chemical principle involved and the ease by which its advantages could be demonstrated both experimentally and in the clinic, it rapidly gained favor and led to the development of a large number of pharmaceutical specialties. The point of this discovery is that water or—to reduce the principle to its clinical application—urine will dissolve approximately the normal amount of any sulfa drug despite the fact that it may be already saturated with other sulfa drugs. The importance of this discovery was associated with its overcoming the tendency of sulfa drugs to crystallize out in the kidney on account of their low solubility and to cause in exceptional cases severe damage and even death in the absence of proper precautions, such as the maintenance of a high water intake. This discovery, then, had great implications for increased safety in sulfa drug therapy, and hence for the restimulation of this therapy. For this reason each additional report as it appeared in the literature was given fullest publicity. The Pharmaceutical Industry was quick to perceive the implications regarding possible new products, and a number of specialties were introduced. Incidentally, the marketing of such products gave rise to new problems of chemical control and here exists an example of the cooperation of the Stamford Research Laboratory as a source of technical service information.

A group at the Stamford Research Laboratory had been studying the metabolic products of sulfa drugs in the urine after oral administration. In the course of this work, a color reaction was discovered, capable of distinguishing sulfadiazine from many of its metabolic products. The reagent used was 2-thiobarbituric acid. Sulfadiazine under these conditions developed a red color while many of the metabolic products of sulfadiazine, and also a number of other sulfa drugs, did not. The potential application of this method to the specific determination of sulfadiazine in pharmaceutical mixtures was immediately apparent, and it has proved useful for that purpose. For example, a mixture of sulfadiazine and sulfamerazine can readily be controlled by a determination of the total sulfonamide content by the usual U.S.P. method, followed by the determination of sulfadiazine specifically by the 2-thio-

Booth
214
A. M. A.
SHOW



Arthur Colton Company

Presents

THE NEW No. 175 AUTOMATIC TUBE FILLING MACHINE

successor to the famous Colton No. 17—the world's most popular tube filler

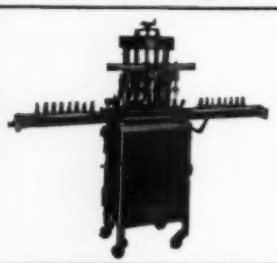
Introduction of the No. 175 marks a new achievement in speed, precision and economy in filling tubes with creams, pastes, powders, liquids. Its performance is unapproached by any other tube filler.

Standard Single No. 175, 55 tubes a minute up to 1½" dia. x 7¼" long. Standard Twin, 85 a minute up to 1⅜" dia. x 7¼" long. Specials: No. 180 Single, tubes 2¼" x 7¼"; Twin, tubes 1⅛" x 7¼". Write for delivery information.

ARTHUR COLTON CO.
DIV. SNYDER TOOL & ENGINEERING COMPANY
3431 E. LAFAYETTE AVE. • DETROIT 7, MICHIGAN

FOODS? CHEMICALS? SYRUPS?
LIQUORS? COSMETICS? DRUGS?

Packer "Junior" Liquid Filling Machine



Maximum Production
in Small Space • Versatile

This GIANT for performance is tailored to the needs of packers with limited space. It has all the features of larger, more expensive fillers, yet maintains the precision engineering standards for which Packer Fillers are famous.

for CANS up to quart size
for BOTTLES fractional ounces to quarts

- Fills liquids, thin, foamy, viscous, hot or cold
- Available in 8, 10 or 12 spouts
- Quickly adjustable for various sizes
- Handles sprinkler type
- Liquid contact parts of stainless steel, brass and resistant materials
- Easy to clean

Illustrated Bulletin Available. Write.

PACKER MACHINERY CORP.
30 Irving Place, New York 3, New York

SEYDEL

For an efficient and economical preservative for cosmetics, pharmaceuticals, etc. why not investigate

ANTIMOL®
ACIDIC SODIUM BENZOATE

Leaflet and laboratory reports available.

SEYDEL CHEMICAL COMPANY
Established 1904 JERSEY CITY 2, N.J. Cable Address "SIZOL"

VANILLIN
ZIMCO® LIGNIN VANILLIN U. S. P.
A Natural Source Vanillin Originated and Manufactured in the United States.
A Finer Vanillin of Exquisite Aroma.
Consult your flavor supplier
Sterwin Chemicals Inc.
SUBSIDIARY OF STERLING DRUG INC.
1450 BROADWAY, NEW YORK 18, N. Y.
445 Lake Shore Drive, Chicago 11, Ill.
FACTORY: ROTHSCHILD, WISCONSIN

barbituric acid reaction. The same group developed a second and entirely different method of analysis which has proved valuable in the control of mixed sulfa products. This method involves paper chromatography and permits the positive identification and quantitative determination of each separate sulfonamide in a mixture. Since it affords complete assurance as to the composition of a mixture, it has been adopted for routine use by a number of pharmaceutical firms.

Another phase of Technical Service in the sulfa drug field might be mentioned. The widespread introduction of mixed sulfa therapy resulted in the employment of sulfamethazine in human therapy for the first time in this country, whereas it had been used very widely in England and elsewhere in Europe as an individual sulfa drug. When the advent of mixed sulfa therapy made it advisable to introduce the drug in this country in mixtures, the extensive European clinical literature was drawn upon for detailed information about its pharmacology and its comparison with drugs more widely known in this country with regard to dosage, blood levels, and in general therapeutic effectiveness. This information from the literature, augmented with data from Cyanamid's laboratory files, was adequate to assist the American Pharmaceutical Industry in rapidly adapting this compound to their own special combinations.

The case of sulfamethazine affords another opportunity of illustrating how data worked out in rather fundamental studies can be of assistance in practical problems subsequently encountered. In the course of developing final specifications for the product, a test for acidity was run according to the procedure outlined in the U.S.P. for sulfamerazine. According to this procedure a certain excess of the powdered material is stirred with water at 70°C. and the mixture is allowed to cool. Then, after filtration, a portion of the clear solution is titrated with alkali, a limit being imposed upon the amount of alkali required to reach the phenolphthalein endpoint. It was found that occasional samples of sulfamethazine required considerably greater amounts of alkali to titrate the acidity than were permitted in the U.S.P. for sulfamerazine. It was known that sulfamethazine is considerably more soluble than sulfamerazine and it was thought that this difference in solubility of the drug itself might be the reason for the occurrence of a high acid value. However, the variability in the results of the test was such that evidently some other factor must be involved. The Standards Laboratory took up the problem and found that when a given sample gave a high titration with alkali, indicating an apparently high acid content, titration of the saturated solution with sodium nitrite had an equally high value. This showed that the dissolved substance was not an inorganic acid or some other acid impurity, but actual dissolved sulfamethazine. Further work showed that when the cooling of the saturated solution in the presence of excess solid was conducted with constant agitation a satisfactorily low value for the acid content was obtained. This was considered to

be a complete solution of the problem. However, further experience showed that sometimes a very high value was obtained despite the constant agitation during the cooling period. This reopened the problem and at this point the explanation was found in the published literature; namely, in Northey's American Chemical Society monograph on the sulfonamides, which contains the following statement:

> "If the anhydrous, high-melting-point material is dissolved to form a saturated solution at a high temperature and the solution is cooled while in contact with the solid, the solution remains indefinitely supersaturated, apparently because it is not in equilibrium with another phase of the same material. Evidently the compound is hydrated in solution, or possibly is converted to the isomeric low melting form, so that it cannot crystallize on the particles of anhydrous, high-melting sulfamethazine."

The acidity test therefore is now carried out by the usual procedure, employing constant agitation while the temperature is reduced to room temperature, with the proviso that should an abnormally high acidity test be obtained, the saturated solution should also be titrated by the sodium nitrite procedure and the amount of the latter titration be subtracted from the alkalimetric titration to give the total net acidity.

An entirely new field of sulfonamide preparations has been opened up recently with the marketing of products containing the sulfas and penicillin in a single dosage form. This type of therapy began on a purely empirical basis. Physicians or surgeons who were confronted with particularly difficult cases naturally tried adding a second chemotherapeutic agent to the one which they would ordinarily use, or the one which they had already tried with incomplete therapeutic benefit. And so ever since the widespread introduction of penicillin, there have been individual reports of the use of penicillin in combination with a sulfonamide. Gradually, a literature accumulated regarding the advantages of this combined therapy. As early as 1948 such reports were sufficiently numerous to warrant collection in a preliminary publication. The idea of actually combining penicillin and the sulfas in a single product such as a tablet became practical only when the price of penicillin had declined sufficiently so that the cost of the combination would not be prohibitive. This point was eventually reached and meanwhile the effectiveness of oral penicillin when used in sufficient dosage was being established. The time was now right for the introduction of pharmaceutical preparations containing both agents, and in Canada several such products did appear. Subsequently, after clearance by the Food and Drug Administration, American firms entered the field with this type of product and we now have several pharmaceutical houses marketing products of this type. The development is not limited to tablets but includes also liquid products, that is, mixtures of various types where the penicillin is dissolved by the pharmacist at the time of dispensing the prescription.

The distribution of technical information is accom-

Direct Importers

AGAR AGAR

(all grades)

MENTHOL CRYSTALS

U.S.P.

Established 1928

CICO

CONSUMERS IMPORT CO., INC.

Empire State Building, 350 Fifth Avenue, New York 1, N. Y.

Telephone: Longacre 3-0415

Cable Address: Purefood - New York

"COSMETICS"

A New Booklet
on
An Old Service

Terse and Timely

Send For
Free Copy

RESEARCH LABORATORIES
FOSTER D. SNELL INC.
CHEMISTS AND ENGINEERS
29 WEST 15TH ST. NEW YORK 11, N.Y.
PHONE WATKINS 4-8800

PRIVATE FORMULA
Tablets and Capsules

BY THE THOUSANDS---
OR BY THE MILLIONS

Over 36 years' experience enables us to render you prompt, accurate, and dependable service in the manufacture of your tablets and hard shell capsules. Our central location expedites delivery to any point in the country. Furnished bulk or packaged.

Vitamin Tablets and Capsules—Tablets—Ointments—Powders

We Invite Your Inquiries

Standard Pharmacal Co.
OF CHICAGO
PRIVATE FORMULA MANUFACTURERS
M. F. Charley, President
847-853 W. JACKSON BLVD. CHICAGO 7, ILL.

plished in several ways: 1. through Calco's own publications, 2. regular publication in the scientific and trade journals, and 3. direct correspondence or in person. There are three Calco publications in the pharmaceutical field; the first being the regular Calco Technical Bulletin. These are usually issued when sufficient information has accumulated in the published literature and elsewhere to permit the drawing of a rather well-defined picture as to the status in therapeutics of a Calco product. These technical bulletins are principally reviews of clinical reports on a comprehensive scale and as such are designed to enable the reader to gain quickly a reasonably good basis for a judgment as to the value of the agent, the market which might be represented, and ultimately whether or not he should consider introducing a specialty of his own containing the particular medicinal substance. Furthermore, if the latter decision is favorable, the bulletin is intended to help in the development of descriptive and promotional literature. These bulletins also contain sections devoted to pharmaceutical compounding, and it is expected that the growth of the Technical Service Laboratory will permit a considerable expansion in this portion of future bulletins.

The second major type of publication is known as Calco Applications. This is a monthly news letter presenting developments in the fields of therapy represented by Calco pharmaceutical products. These bulletins usually comprise summaries of one or more major clinical developments in a single field. Emphasis is placed on timeliness and upon reports having far-reaching implications. The preparation of each month's issue of this news letter is the occasion for a thorough survey of practically all of the English language journals and some of the foreign language literature, including an appropriate number of review and survey publications. Occasional issues of this bulletin are devoted to compounding information judged to be of immediate interest.

The third type of Calco publication is the special brochure. These are prepared when for one reason or another it is not considered appropriate to compose a regular Calco Technical Bulletin. One reason would be that the information, while of immediate value, is not likely to be essential permanently. Another reason is that the information on hand may be preliminary and may have to be modified when further results are available, and yet appears important enough to warrant distribution. Another reason for this type of publication is when the material is judged to be of potential interest to a limited number of manufacturers. Examples of subjects which have been handled in this way may be mentioned. In the early phases of para-aminosalicylic acid therapy for tuberculosis, quite extensive clinical reports appeared in the Swedish literature, but practically no other information was available. This Swedish information was very important, but the sum total of published material was insufficient for the preparation of a regular Calco Technical Bulletin. The problem was handled by preparing English translations of the Swed-

ish reports and combining them with whatever other preliminary data could be found elsewhere. The combined material was published in the form of a brochure in mimeographed form. Two years later, a regular Calco Technical Bulletin covering this subject was published. Another subject which has been handled in this way is the special aspect of folic acid therapy having to do with the megaloblastic anemia of pregnancy. When a sufficient number of reports on this subject had accumulated to present a convincing story, they were presented in the form of a mimeographed brochure. One practical import of this information was that pharmaceutical manufacturers might consider whether their products for prenatal vitamin and mineral supplementation should include folic acid. A number of manufacturers have by this time added folic acid to their products intended for this purpose.

The second basic way for the dissemination of Technical Service information is by publication in the regular scientific or trade journals. This is done when experimental data are available which deserve wide and permanent record; another reason is when speed of widespread publication seems desirable or necessary. For example, when para-aminosalicylic acid was introduced there were no standards of purity; and in testing various samples, the first thought of many clinicians and their associated laboratories was to take the melting point as a criterion of purity. It so happens that this physical constant is not a good one for the purpose in the case of this compound. The reason is that the compound on heating very rapidly loses carbon dioxide to form meta-aminophenol. The rate of this decomposition has a very appreciable value as the melting point is approached and for this reason when the regular U.S.P. technique for determining melting points is followed, the observed melting point is considerably below the true melting point of the compound. This fact caused considerable confusion in the clinical literature and to a certain extent even in the chemical literature. Therefore, when the Calco Standards Laboratory worked out a modification of the U.S.P. melting point technique giving a value of about 150°, which was sufficiently precise to show a difference between samples varying in purity, it was considered advisable to publish this information as soon as possible. It comprised the subject matter of a communication to the editor of the Journal of the American Chemical Society.

This, then, is Technical Service as it is practised by one large supplier of bulk medicinal chemicals. These are the ways and means by which its primary objective of providing information is pursued. Information is the commodity in greatest demand on the part of the new products personnel of the typical pharmaceutical manufacturing firm. The more fully this demand is met by the Technical Service of the bulk chemical supplier, the greater is his assurance that his product will receive adequate consideration from these people, who are charged with the selection of a few new products for distribution out of the many which at any given time are clamoring for their attention.

FOUNDED T & B 1856

The Symbol of Standardization

GUMS

ARABIC
TRAGACANTH
KARAYA

WHOLE GUM—Cleaned and repacked before shipment.

POWDERED GRADES—Standardized by milling under strict laboratory control.

GRAIN GUMS—Graded to uniformity and standardized.

T & B STANDARDIZED GUMS are your best protection against production difficulties.

All Powdered Gums Standardized by Laboratory Control

THURSTON & BRAIDICH
286 Spring Street New York 13
Represented in Chicago by A. C. Drury & Co., Inc.

Your Best Source

Aromatic Chemicals

Basic Perfume Materials

SEELEY & CO.

Years of painstaking research enable us to offer a superior line of perfume materials designed for the discriminating perfumer. Our knowledge is at your disposal. Full information supplied upon request.

SEELEY QUALITY IS STANDARD QUALITY

SEELEY & CO., INC.
136 LIBERTY STREET NEW YORK 6, N.Y.
Factories & Warehouses
NYACK, N. Y. LOS ANGELES, CALIF.

Professional Service and Classified Advertising

SEIL, PUTT & RUSBY, Inc.

Earl B. Putt, President and Director
Alfred S. Moses, Vice President
Stephen S. Voris, Ph.D., Chief Chemist

Analytical and Consulting Chemists
Formerly Experts for U. S. Dept. of Agriculture

Analyses Made — Formulas Developed
Research Investigations Conducted

Specialists in the Analysis of

Beverages — Essential Oils
Flavoring Extracts — Toilet Preparations
Foods — Spices — Drugs
Proprietary Medicines — Special Formulas
Pyrethrum, Rotenone and other Organic Insecticides

Lab's: 16 East 34th St. New York, N. Y.
Telephone MUrray Hill 3-6368

***ARLINCO RESEARCH LABORATORY, INC.**

Research, Formulation and Application to the Industry. Ethical Pharmaceuticals, Drugs, Cosmetics and Perfumery.

333 W. 52nd St., New York 19, N. Y.
PLaza 7-3861

A-R-L-Inco means: Applied Research Laboratory Incorp.

BJORKSTEN RESEARCH LABORATORIES

Research on contract basis
Arrangements for dermatological testing

CHICAGO, ILL. - 13791 S. Ave. O
MADISON, WIS. - 323 W. Gorham St.
NEW YORK, N. Y. - 50 E. 41st St.

EVANS RESEARCH & DEVELOPMENT CORP.

Chemical research—processes—products
Special facilities for cosmetics

SEND FOR BOOKLET "D"

250 E. 43rd St., N. Y. 17, N. Y. MU. 3-0071

RONALD CLARKSON
Tablet Consultant

A complete Advisory Service on New Tablet Products–New Tablet Applications–Special Coating Problems–Formula Developing–Production Methods–Plant Layout. Pharmaceutical–Chemical–Industrial–Food–Confections–Cosmetics–Toiletries.

1905 GRANT AVE., PHILADELPHIA 15, PA.
ORchard 3-4105

"L'ART de la PARFUMERIE par EXCELLENCE"
DR. JEAN JACQUES MARTINAT
PERFUMER CONSULTANT

Creations of Highly Original Perfumes.
Duplications of Most Difficult Fragrances.
Unique Kind of Profesional Services.

333 West 52nd St., New York 19, N. Y. Tel. PL. 7-3861

BO PRYTZ, Ph. D.
Consultant

Enzymes, analysis, pharmaceuticals
drugs and cosmetics

Cold Spring Harbor, L. I., N. Y.

LEBERCO LABORATORIES

Hormone Assays • Drug Assay
Pharmaceutical and Cosmetic Research
Sterility Tests • Toxicity Studies

Send for information concerning our services
125 HAWTHORNE ST., ROSELLE PARK, N. J.

Machinery and Equipment For Sale

UNION Rebuilt Machinery Established 1912

MODERN REBUILT EQUIPMENT
For Immediate Delivery
At *Great* Savings

Stokes and Smith G1 and G2 Auger Powder Fillers and Cappers.
Day and Robinson 100, 200, 400, 2500 & 4000 lbs. Dry Powder Mixers.
Baker Perkins, Day, Read 15 to 150 gal. cap. Double Arm Mixers.
Pony Mixers—40, 15 and 8 gal. caps.
Fitzpatrick S.S. "D" Comminuter, 10 HP.
Mikro 1SH, 2TH, 4TH Pulverizers.
Hobart, Read, Glen 30-120 qt. Mixers.
B. P. Jumbo-type 3500 gal. Steam Jacketed, Double Arm Sigma Mixer.
Stokes 90D Auto. Tube Filler & Closer.
Stokes 2C, Colton 4 PF Cream Fillers.
Colton Powder Tube Closer & Crimper.
Burt Automatic Wraparound Labeler.
Filler and Elgin 1, 2, 4 and 8 head Stainless Steel Piston Fillers.
Resina LC Automatic Capper.
Pony MX and ML Labelrites.
Ermold and World Semi & Fully Auto. Rotary and Straightaway Labelers.
Colton, Stokes Rotary Tablet Machines.
Triangle G2C, A6CA Electri Pak Fillers.
Hayssen 3-7, Scandia Wrappers.
Standard Knapp No. 429 Carton Sealer.
Ceco Carton-Closing Machines.

This Is Only A Partial Listing
Act NOW For Choice Buys
Tell Us All Your Requirements

Union STANDARD EQUIPMENT CO.
318-322 LAFAYETTE ST., NEW YORK 12, N.Y.

FOR SALE: Munson 2000 lb. Rotary Batch Mixer; 7—Day No. 71 S/S Roball Sifters; Size 11, 23, 43, and 53 Rotex Screens; Dopp 350 and 650 gallon Open jacketed Kettles; Sperry 36" Filter Press, 24 chambers; Sperry 30" Aluminum Filter Press; Empire State Para Block Press; Mikro No. 1 & No. 2 Pulverizers; Blaw-Knox 6' x 4' Chrome-Plated Chilling Roll; 2—Wolf 1800 lb. and 1—Stokes 600 lb. Ribbon Blenders; Standard Knapp Auto. Self-adjusting Carton Sealer; Stokes 79-80 Tube Filler & Closer; Stokes DD & RD Rotary, and Colton No. 4½ Single Punch Tablet Machines; Knapp 3B Wrap-Around Labeler; 2—Model BB Transwraps; Ceco A3901-12 Sealer; Pony Labelrites, M, ML & MX; 38—Aluminum Storage Tanks, 800, 600 & 250 gallons; Special—27 unused Rectangular 200 gal. Aluminum Storage Tanks at only $75 each plus $15 crating. Only a partial list. Send us your inquiries. Consolidated Products Co., Inc., 14-15 Park Row, New York 38, New York. Phone BArclay 7-0600.

FOR SALE: New Stainless Steel Tanks 50 to 1000 gals. Samco Jr. vacuum bottle filler. Stokes High Vac. pumps, Dryers, Atmos. & Vacuum. Tablet machines, ½" to 3". Stokes R & Colton No. 4T. Powder, Paste & Liquid Mixers. Powder & Paste Fillers. Rotex Sifters. Grinders, Hammer Mills, Roller Mills, Pebble, Ball & Jar Mills. Portable electric agitators. Filter presses. Centrifuges. Kettles & Tanks, Stainless, Glass Lined, Copper, Alum., & Steel. Colloid Mills. Soap Machinery. Send for Bulletin. We buy your surplus machinery. Stein Equipment Co., 90 West Street, New York 6, N. Y.

Machinery and Equipment For Sale

FOR SALE: 2—W. & P. 100 gal. Double Arm Stainless Steel Mixers; Dry Powder Mixers 50 to 5000 lb. cap.; Colton No. 4 Worm Tube Fillers; Colton Closers & Crimpers; Stokes No. 90 and Colton No. 17 Automatic Tube Fillers & Closers; N. J. Pony Labelers 86-M & 86 ML; Standard No. 429 Carton Gluer & Sealer; Stainless Steel Jacketed Kettles and Tanks; Portable Agitators ¼ & ½ H.P. High & Slo Speed, Stainless Shafts and propellers; Famco No. 10 & No. 12 Foot Presses. Send for Bulletin A-26. The Machinery & Equipment Corp., 533 West Broadway, New York 12, N. Y. GRamercy 5-6680.

FOR SALE: all New 50 Stainless Steel Clad Jacketed Kettles—40 lb. W. P. 30, 40 and 60 gallons. THE MACHINERY & EQUIPMENT CORP., 533 West Broadway, New York 12, N. Y. GRamercy 5-6680.

STOKES No. 2C Semi-Automatic Tube Filler; Stokes Rotary 16 punch tablet presses. PERRY EQUIPMENT CORP., 1523 West Thompson St., Phila., 21, Pa.

Machinery Wanted

WANTED: 1—600 lb. and 1—1000 lb. Powder Mixers, 6—Copper Coating Pans, 1—No. 43-A Granulator, 1—Single Punch Tablet Machine, and 1—Fitzpatrick Comminutor. Give full description and price. Box N-5, DRUG AND COSMETIC INDUSTRY.

Situations Wanted

REGISTERED PHARMACIST, M. S. Degree, desires position in small manufacturing plant in midwest. Box F-1, DRUG AND COSMETIC INDUSTRY.

DR. OF CHEM. ENG. with long experience in the industry of cosmetics, perfumes, soaps and many pharmaceutical and technical products, would accept at a moderate starting salary. Any position in research development or manufacturing. Perfect French, German knowledge. A-2, DRUG AND COSMETIC INDUSTRY.

COSMETIC EXECUTIVE, Chemist, Ph.D., well known in the industry, 23 years of diversified experience, imaginative and creative in development, research and manufacture of cosmetics and perfumes, wishes to change his present position for a life time proposition with a leading House. Strictly confidential. Write A-3, DRUG AND COSMETIC INDUSTRY.

Business Opportunities

WANT TO BUY—Close-outs in Perfume Bottles. Send samples and Prices. Jack Hellar Box 6208 Metro. Sta. Los Angeles-55.

WORLD RENOWN cologne manufacturer of prestige and tradition will grant concession for production and distribution of 100 Yrs. famous label. Offers. Box A-1, DRUG AND COSMETIC INDUSTRY.

WANTED to buy long established manufacturing company in the drug, cosmetic or related field. Medium size. Will consider purchasing half or larger interest. Box A-4, DRUG AND COSMETIC INDUSTRY.

FOR SALE IN ONE PACKAGE: over 50 formulae, bottles, jars, caps, labels, over 1,500 gallons of cologne by manufacturer of complete line of cosmetics since 1912. For sale with this fine business, also a large Beauty Salon in the heart of Washington, D. C.'s exclusive Connecticut Avenue. A golden opportunity! Write to: Louey Venn of London, Inc., 1224 Connecticut Avenue, Washington 6, D. C.

FOR SALE

21 MM CAPS FDNK TINPLATE BLACK OUTSIDE, WHITE INSIDE.

Price—$2.73 per M. F.O.B. Lafayette, Louisiana.

Box A-5, DRUG & COSMETIC INDUSTRY
101 West 31st Street, New York 11, N. Y.

Use **LABELS** AND **SEALS..**

by

JOHN HORN

835 - 839 TENTH AVENUE

NEW YORK 19, N. Y.

FOR OVER FIFTY YEARS

for greater sales appeal

METAL • EMBOSSED • ENGRAVED

DIE STAMPING FOR BOXMAKERS

PRIVATE LABEL SPECIALISTS

ONE PIECE TO A MILLION — WE HONOR YOUR ACCOUNT

Grongoire

- COMPLETE FACILITIES FOR COSMETIC MANUFACTURING AND ASSEMBLY
- MANUFACTURING SHIPPING CREATING PACKING AND WAREHOUSING

GRONGOIRE 127 Green St. Brooklyn 22 Write Dep't T

Aromatic Chemicals

FOR PERFUMERY AND FLAVORS

Isopropyl Quinoline • **Isobutyl Quinoline**

Ethyl Anthranilate • **Isobutyl Anthranilate**

Diacetyl • **Acetyl Propionyl** • **Acetoin**

FAIRMOUNT CHEMICAL CO., INC.

600 FERRY STREET • NEWARK 5, N. J.

SYNTHETIC

MENTHOL U.S.P. CRYSTALS

racemic grade

A New Economical and Pure Product, Which Replaces Natural Menthol at Considerable Savings.

ATLANTIC RAW MATERIALS, INCORPORATED

50 Church Street, New York 7, N. Y.

Tel. WOrth 4-0750

TL Beeswax

- PURE WHITE
- EXTRA QUALITY
- ABSOLUTELY PURE
- ABOVE U.S.P. STANDARDS
- Samples will gladly be sent on request—at no obligation.

Serving The Trade For 99 Years

THEODOR LEONHARD WAX CO., INC.

HALEDON, PATERSON NEW JERSEY

Western Distributor: A. C. Drury & Co., 219 E. North Water St., Chicago, 11, Ill.

LABORATORY SERVICES

Vitamin assays by biological, microbiological, and physico-chemical means

A.O.A.C. Vitamin D_3 chick assays

U.S.P. XIV Vitamin A assays

Mineral determinations including fluorine and other trace elements of nutritional importance

Phenol coefficient determinations

Warm-blooded toxicity studies

Write for details

WISCONSIN ALUMNI RESEARCH FOUNDATION

P.O. Box 2059 Madison 1, Wisconsin

falba

Reg. U.S. and Foreign Countries

ABSORBS 5 TIMES ITS WEIGHT OF WATER

THE ORIGINAL ABSORPTION BASE

Write for suggested formulae

Pfaltz & Bauer, Inc.

EMPIRE STATE BLDG., NEW YORK 1, N.Y.

MOULDS

for LIPSTICKS MASCARO SUPPOSITORIES STYPTIC PENCILS

and **DIES** for ROUGE COMPACT POWDER

Write for Catalog

A. CAVALLA, INC. 163 WEST 18TH STREET, NEW YORK, 11, N.Y.

as near as your phone...

pure **WITCO** stearates
prompt **WITCO** service

WITCO-made STEARATES measure up to the most exacting specifications. Extreme purity, fine particle size, high covering power, excellent adhesion . . . these advantages make WITCO Stearates ideal for use in face powders, ointments, creams and similar products. They are also widely used as internal and mold lubricants.

Best of all, WITCO Stearates are readily available. For prompt service just pick up your phone and call our nearest office:

New York
295 Madison Avenue
Murray Hill 5-6020

Boston
141 Milk Street
Liberty 2-2139

Chicago
75 East Wacker Drive
Financial 6-2960

Los Angeles
649 South Olive St.
Trinity 9575

Akron
311 Evans Building
Jefferson 2154

Cleveland
616 St. Clair Ave., N.E.
Cherry 1-0583

Houston
1 No. Main Street
Blackstone 3291

San Francisco
785 Market Street
Garfield 1-7526

WITCO chemical company
295 MADISON AVENUE, NEW YORK 17, N. Y.

Los Angeles • Boston • Chicago • Houston • Cleveland • Akron • San Francisco • London and Manchester, England

ADVERTISING INDEX

Atlantic Raw Materials, Inc. 551
Albek, Inc., Albert 526
American Cholesterol Products, Inc. 511
Ansbacher Seigel Corp. 431
Armstrong Cork Company ..... Insert facing 469
Aceto Chemical Co., Inc. 528
Atlas Powder Co. 417
Avon Products, Inc. 420

Baker Chemical Co., J. T. 490
Beauty Fashion 442
Benzol Products Company 520
Bowman & Co., Charles ..... Insert facing 420
Bush & Co., W. J. 520

Calco Chemical Division 421
Calif. Fruit Growers Ex. 506
Calumet Manufacturing Co., Inc. 480
Camilli, Albert & Lalou, Inc. 520
Carr-Lowrey Glass Co. 466
Cavalla, Inc., A. 551
Consumers Import Co., Inc. 547
Colton Company, Arthur 545
Continental Can Company 472

de Laire Division of Dodge & Olcott, Inc. 416
Devold Oil Co., Inc., Peder 537
Distillation Products, Inc. 425
Dodge & Olcott, Inc. ..... Insert bet. 428-429
Dow Chemical Co. 427
du Pont de Nemours & Co., (Inc.), E. I. ..... Insert facing 444
Durlin & Co. ..... Insert facing 429

Economic Machinery Co. 530
Emery Industries, Inc. 426
Eppenbach, Inc. 544
Ertel Engineering Corp. 538

Fairmount Chemical Co., Inc. 551
Felton Chemical Co., Inc. ..... Insert facing 428
Firmenich & Co., Inc. ..... Cover 4
Florasynth Labs., Inc. ..... Insert bet. 428-429
French, Inc., Benj. 511
Fritzsche Brothers, Inc. ..... Insert bet. 524-525

Gair Company, Inc., Robert 535
Gane & Ingram, Inc. 538

Givaudan-Delawanna, Inc. ..... Insert bet. 436-437
Glycerine Products Assn. 438
Goldschmidt Chem. Corp. ..... Insert facing 437
Greeff & Co., R. W. 520
Grongoire 551

Herculeas Powder Company ..... Insert bet. 444-445
Heyden Chemical Corp. 486
Hoffmann-LaRoche, Inc. 518
Hormann & Co., F. R. 539
Horn, John 551
Huisking & Co., Inc., Chas. L. 537

Industrial Chemical Sales ..... Cover 2
Ivers-Lee Company 474

Kimble Glass ..... Insert facing 485
Kelton Cosmetics Co. 531
Kessler Chemical Co. 510
Kinetic Chemicals, Inc. 478-479
Kohnstamm & Co., H. ..... Insert facing 436
Kolar Laboratories, Inc. 542
Kolmar Laboratories 430

Leonhard Wax Co., Theodore 551
Lueders & Co., George 443

Magnus, Mabee & Reynard, Inc. 424
Mallinckrodt Chemical Wks. ..... Insert facing 445
Merck & Co., Inc. 428
Metal Glass Products Co. 539
Michel & Co., Inc., M. 529
Mills Corp., Elmer E. 470
Minnesota Mining & Mfg. Co. 529
Monsanto Chemical Company 439

Naugatuck Aromatics ..... Insert facing 421
Neumann, Buslee & Wolfe, Inc. 544
New Jersey Zinc Co. 541
New Jersey Machine Corp. 498
Norda Essential Oil & Chemical Co., Inc. 482

Owens-Illinois Glass Co. ..... Insert facing 468; 484

Packer Machinery Corp. 546
Parento, Inc., Compagnie 543
Parsons Imports, M. W. 510
Penick & Co., S. B. 433
Pennsylvania Glass Products Co., Inc. 481
Pennsylvania Refining Co. 436
Perl Machine Mfg. Co. 502

Pfaltz & Bauer Co., Inc. 551
Pfizer & Co., Inc., Chas. 418-419
Pittsburgh Lectrodryer Corp. 496
Pittsburgh Plate Glass Co., Columbia Chemical Division 437
Polak's Frutal Works 429
Progressive Labelling Machine, Inc. 529
Pulverizing Machinery Company 533

Reinitz Soap Corp. 534
Richford Corp. 476
Robinson Wagner Co., Inc. 441
Roubechez, Inc. 526
Roure-Dupont, Inc. 440

Santonin Company of America, Inc. 537
Schering Corporation 423
Scoville Manufacturing Company 477
Seeley & Co., Inc. 549
Seydel Chemical Co. 546
Sheffield Tube Corp. 413
Snell, Inc., Foster D. 548
Standard Oil Company 415
Standard Pharmacal Co. 548
Sterwin Chemical, Inc. 546
Stokes Machine Co., F. J. 494
Stokes & Smith Co. 502
Strong Cobb & Co., Inc. 507
Synfleur Scientific Labs., Inc. ..... Insert bet. 444-445
Syntomatic Corp. 432

Tamms Industries, Inc. 528
Thurston & Braidich 549
Tombarel Products Corp. 488

Ungerer & Co., Inc. ..... Cover 3
U. S. Automatic Box Machy Co. 500
U. S. Bottlers Machinery Co. 536
U. S. Industrial Chemicals, Inc. ..... Insert bet. 508-509

van-Ameringen-Haebler, Inc. 434-435
Verley & Company, Albert ..... Insert bet 492-493
Verona Chemical Co. 422

Welch, Holme & Clark, Inc. 532
Whittaker, Clark & Daniels, Inc. 540
Will & Baumer Candle Co. 540
Witco Chemical Co. 552
Wisconsin Alumni Research Foundation 551
Wolf & Co., Jacques 528